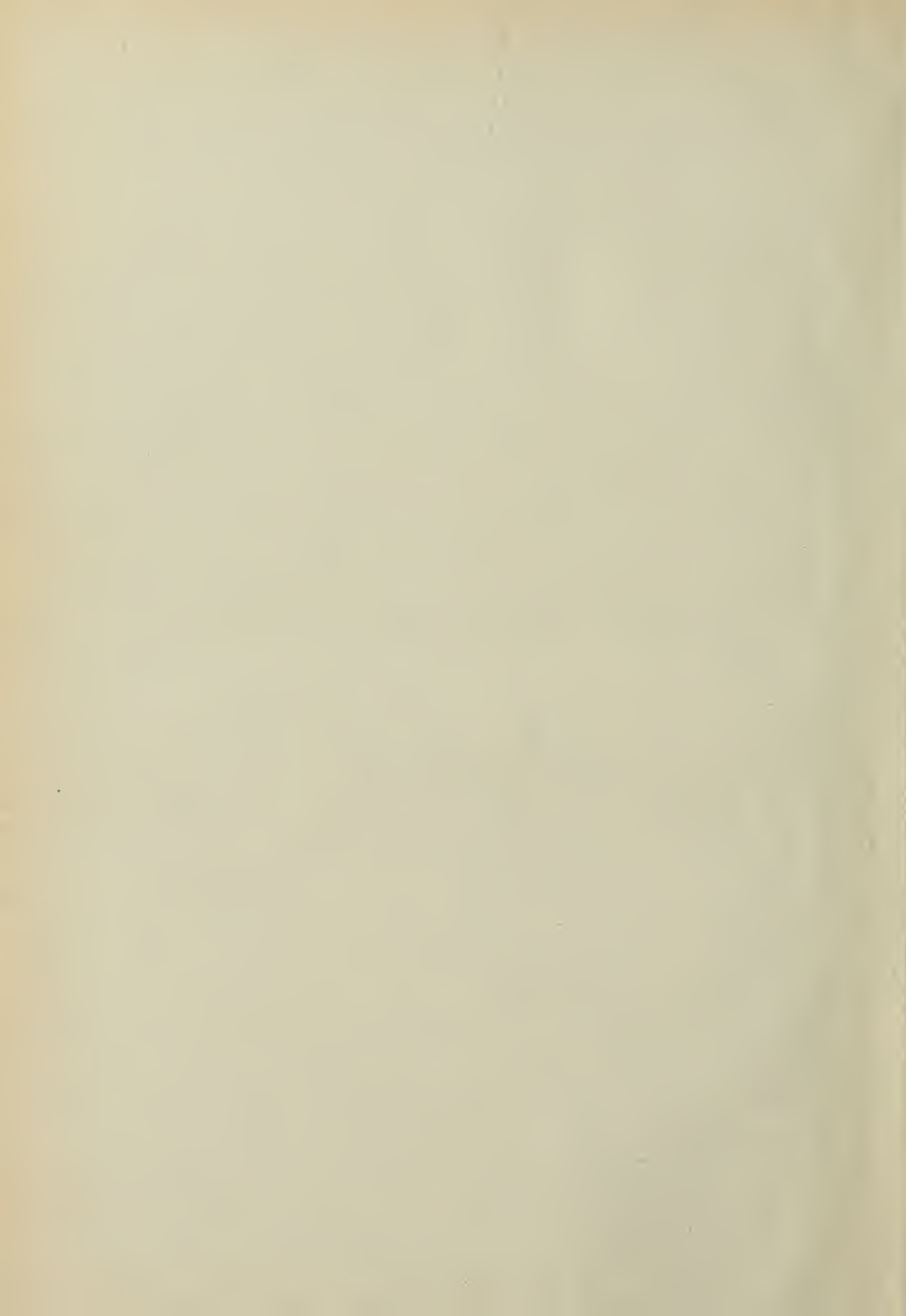


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CONTENTS

Surgical Lesions of the Large Bowel. Fred W. Rankin, M.D.	1	Editorial:	
Welfare Movements and the Michigan State Medical Society. B. R. Corbus, M.D.	10	The New Year.	49
Plastic Surgery: Its Psychological Aspects. Claire L. Straith, M.D., F.A.C.S.	13	The Care of Sick Veterans.	49
The Conservative Operative Treatment of Hydronephrosis. John K. Ormond, M.D., F.A.C.S.	18	For Your Own Protection.	50
Tuberculosis and Reproduction. Fred L. Adair, M.D., and Frank E. Whitacre, M.D.	23	Security.	51
Some Early Printed Documents of the Medical Department of the University of Michigan. George H. Jackson, Jr.	28	Scientific Outlook.	51
The Use of Synephrin Emulsion. Edward K. Carmichael, M.D.	33	Obituary.	57
Schizophrenia. I. L. Polozker, M.D.	34	Communications.	57
Famous Men in Medical History: John Collins Warren. Royal A. Meyers.	39	General News and Announcements.	58
Michigan's Department of Health. C. C. Slemons, Dr.P.H., M.D.	46	Organizational Activity.	60
		Society Activity.	60
		President's Annual Address. Kent County Medical Society. Horace J. Beel, M.D.	67
		Clinics and Social Problems That Threaten Our Professional Entity. Charles J. Whalen, M.D., LL.B.	71
		Why a Post-Graduate Course? Tom Bentley Throckmorton, M.D.	75
		County Societies.	81
		Woman's Auxiliary.	84
		The Doctor's Library.	86

SURGICAL LESIONS OF THE LARGE BOWEL*

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Consideration of surgical diseases of the large bowel revolves around malignancy, for more than two-thirds of all lesions requiring extirpation are carcinomatous. A review of colonic and rectal surgery at The Mayo Clinic for a year reveals the fact that 68 per cent of the total number of operations on the colon or rectum, which were required for major lesions, were for carcinoma. In addition, however, such lesions as tuberculosis, diverticulitis, polyposis, Hirschsprung's disease, fecal fistula, and an occasional bizarre condition, such as intussusception or another benign lesion, required attention.

In the time allotted to me for this presentation, I wish to direct your attention particularly to three problems directly associated with malignant disease of the colon: (1) the relationship of polyps to the development of carcinoma; (2) improved diagnostic methods, and (3) the choice of operation and its mortality.

THE RELATIONSHIP OF POLYPS TO THE DEVELOPMENT OF CARCINOMA

That polyps, multiple or single, are in many instances precursors of malignant dis-

ease in the situation under consideration is no longer unsubstantiated. I should hesitate to assert without reservation that all carcinomas of the large bowel or rectum develop directly on the basis of, or in the presence of, polyps, single or multiple; yet I have the firm conviction that it is so definitely an established sequence in certain unmistakable cases that there is a strong possibility that many more carcinomas than are suspected, if not all, do develop from or as a result of polyps which have been harbored over an indefinite period. Two types of polyp are found in the large bowel and rec-

*Read before the Michigan State Medical Society, Pontiac, Michigan, September 23, 1931.

tum: the polyp which is the result of inflammatory changes, and either a congenital polyp, or that type of polyp which investigators are inclined to regard as a definite primary neoplasm, but which results from slowly developing factors with which

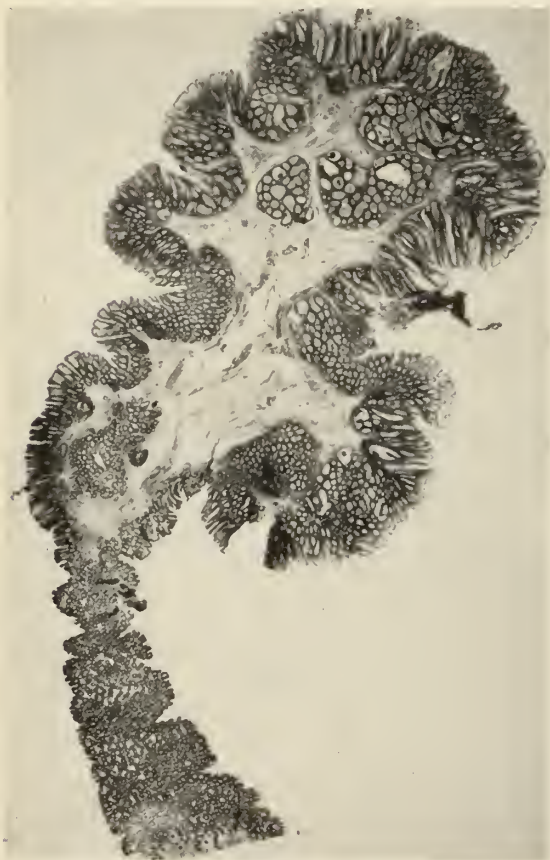


Fig. 1. Polyp of Group 1, of the pedunculated type.

they are not entirely familiar. This primary lesion consists of diffusely scattered tumors of the adenomatous variety, which are found throughout the large bowel, and which usually promote polyposis or, less commonly, diffuse adenomatosis. I am inclined to think that "polypoidosis" is a more satisfactory term for this particular type of lesion. The other congenital type may be exemplified either by one or more discrete tumors, or by discrete tumors which involve the entire surface of the bowel, from the anus to the ileocecal coil. This is, in reality, more of a neoplastic condition than polypoidosis. Both usually occur in families, and in the former, or the diffuse adenomatous type, the growths are known to undergo malignant metamorphosis in about half of the cases. The two types may be considered

similar in that they represent mucosal hypertrophy, and it is reasonable to believe that single tumors, or multiple tumors, in the large bowel, whether they are the result of inflammatory change, or true neoplasms, after they reach a certain point in development and are subjected to certain (it must be admitted) unknown factors which initiate the malignant drive, may result in identical processes, which develop into malignant growths.

In tracing thirteen of these cases through the sequence of events from a benign to a malignant condition, FitzGibbon and I reviewed the histopathologic characteristics of the polyps and were able to show conclusively that they were not all of a piece, but that in this series there was definite progression from benignancy to malignancy. They were divided into three distinct groups, varying grossly as well as microscopically.

In Group 1, the epithelial elements were found to deviate little from the normal. The tumors are represented by rough, nodular elevations on the mucous surface of the bowel, varying in size from tiny clubs not much larger than a pin point to masses 2 cm. on cross section. It is conceivable that this type of polyp may become malignant, but there is little evidence that it has a tendency to such change. It is interesting to speculate on the normal presence of such polyps in a bowel regarded as normal from the standpoint of function and symptoms. Certainly, such lesions are found most frequently in the mortuary, and lead one easily to the suspicion that a great many, perhaps most, colons, harbor such deviations from the normal mucosa (Fig. 1).

In Group 2, the polyps are distinctly different, not only grossly but microscopically. Their structural changes in both epithelial and connective tissue elements are abrupt, striking, and characteristic. The epithelial elements fail to differentiate into normal intestinal mucosa. The cells are elongated, and by their increased bulk are compressed laterally. Their arrangement may be in single rows, but frequently they are found pushed into multilayered buds, and project into the lumen of the tubules or into the connective tissue matrix. The nuclei are different in that they are more elongated than normal and are stained more deeply. As these epithelial proliferative processes progress, they stimulate a corresponding response in the connective tissue of the under-

lying growths, resulting in the production of a stalk which gives the polyp its pedunculated appearance. The time of the proliferation influences, according to its rapidity, the general anatomic scheme of the polyp, so far as the pedicles are concerned, making them

pleted. By their very presence they may be the initiating factor in intussusception or obstruction, thus calling attention to themselves. Fortunately, they usually are of a relatively low grade of malignancy or of average malignancy, one might say, and the



Fig. 2. Initial development of polyps of Group 2; *a*, tug on the submucosa; *b*, evidences of more active proliferation; *c*, full-grown polyp.

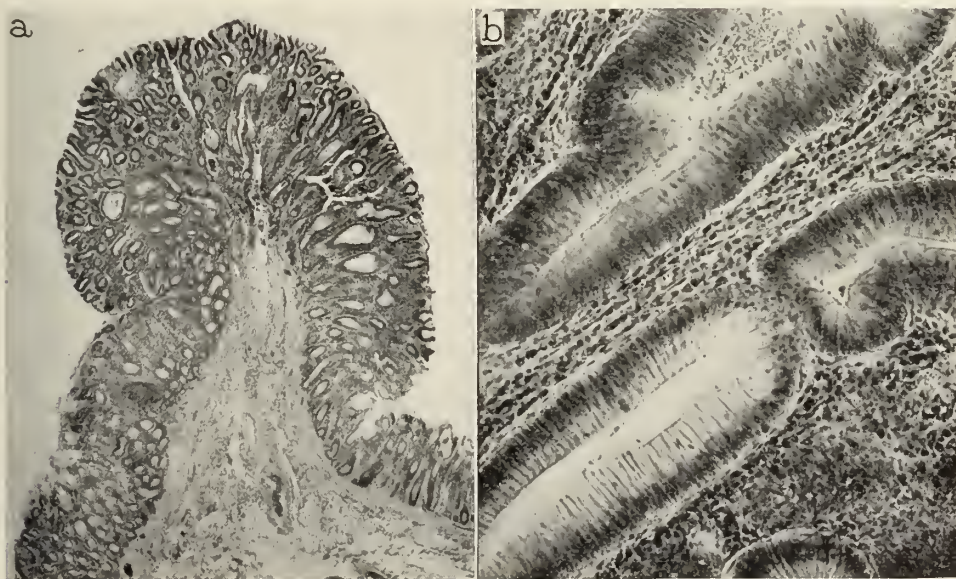


Fig. 3. Polyp of Group 2; *a*, early stage of development, very active; *b*, typical polyp epithelium.

large or small, and is, I believe, an extremely important point in the metamorphosis of polyps to carcinoma. The carcinomas resulting from this group of polyps usually are of the pedunculated type, which, growing toward the lumen of the bowel and presenting themselves as piled-up masses of adenomatous tissue, may grow to huge size before malignant metamorphosis is com-

pleted. By their very presence they may be the initiating factor in intussusception or obstruction, thus calling attention to themselves. Fortunately, they usually are of a relatively low grade of malignancy or of average malignancy, one might say, and the

prognosis, in that they do not project downward and backward to the nodal regions, is more likely to be favorable (Figs. 2 and 3). In Group 3 the polyps show almost complete failure of differentiation of their epithelium. In reality, Group 3 is an advanced and accentuated form of Group 2. The proliferative epithelial element, which outpaces that of connective tissue, results in a com-

plex polyp histologically, which usually is sessile and infiltrating. They may or may not attain large size and age, usually forming the smaller, more punched-out, rapidly-growing and metastasizing types of malignant growth. They proceed toward the peri-

not be allowed to progress, once they are discovered (Fig. 6).

IMPROVED DIAGNOSTIC METHODS

Diagnosis of carcinoma of the colon and its distinction from other surgical diseases



Fig. 4. Polyp of Group 3; *a*, initial growth of polyp; *b*, further proliferation of polyp epithelium; *c*, normal tubules completely suppressed by polyp epithelium.

toneal coat rather than toward the lumen, and in this way invade the nodal structures oftener than the other types (Figs. 4 and 5).

Believing, as I do, that polyps, whether single or multiple, or examples of the so-called diffuse polyposis or adenomatosis, are potentially malignant, I would urge the obvious: that they be treated prophylactically by their immediate removal when they are recognized, either in the course of routine examination or as the result of symptoms referable to the large bowel. In the last year I reported six successful cases of total extirpation of the rectum and colon in multiple stages for just such conditions. Three of these cases were for the diffuse adenomatous type of polyposis, and after successful removal of the colon and rectum, two carcinomas were discovered in one case, one carcinoma in another, and the growths in the third were still benign. The other three operations were performed for diffuse polyposis secondary to chronic ulcerative colitis. Obviously, this formidable operation is not to be attempted except in case of a rather extensive lesion. Single polyps occurring in the rectum, where they can be removed through a proctoscope by a number of simple methods, or in the colon, where laparotomy is required for their extirpation, should

of this organ has been so markedly forwarded by the development of roentgen rays in the last five years that it is now possible accurately to localize and interpret approximately 95 per cent of the lesions of the large bowel by this method, provided only that the bowel has been adequately prepared and cleansed prior to examination, and that the patient is able to retain the barium clyma. This remarkable advance in the hands of expert roentgenologists, who, in the main, make their interpretations under the fluoroscope aided by palpatory manipulation, and check up after localization of the lesion by roentgenograms, already has, and increasingly should bring to investigation lesions of the large bowel at an earlier stage. There is hope that the time is not far distant when routine roentgenologic examination of the large bowel at the hands of expert roentgenologists will be employed in much the same manner as routine gastric fluoroscopy is now applied. If a routine investigation of a properly prepared colon can be added to yearly health examinations, or to examinations of patients under even slight suspicion of harboring pathologic processes, earlier attack and extirpation will be the reward. There is one practical point in the radiologic examination of the large bow-

el which I wish to emphasize most pointedly, and that is the fact that the examination should be made by introduction of the opaque medium rectally rather than orally. To give a patient suspected of having a malignant growth of the colon, particularly if

mediate and thorough examination of the large bowel. More routine examinations and more suspicion of organic disease for slight symptoms referable to the large bowel would be highly desirable in producing earlier diagnosis and treatment (Figs. 7 to 11).

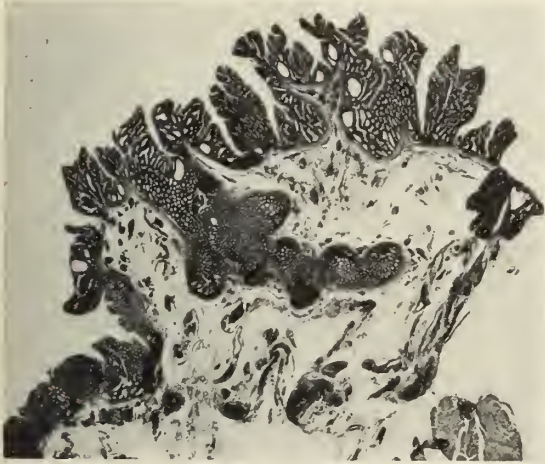


Fig. 5. Polyps of Group 3, showing areas of adenocarcinoma, graded 2.

it is in the left half and is causing obstruction, a barium meal by mouth, in a great many instances would be to produce subacute or even acute obstruction. This unfortunate, unnecessary, and unpardonable complication superimposes an acute condition, fatal unless immediately relieved, on a chronic malignant condition. It is particularly unfortunate that the information derived from oral administration of mediums likewise is far less accurate, and frequently totally inaccurate, in both localization and pathologic interpretation of the lesion. Rectal administration of the opaque medium not only gives more accurate information but avoids such unnecessary complications.

To the roentgenologic examination which, in the end, substantiates the diagnosis, must always be added an accurate history and physical examination. It would be highly advantageous if there were a chain of pathognomonic symptoms indicative of early carcinoma of either side of the large bowel, but unfortunately, the initial symptoms may be slight and the condition in an intermediate stage before urgency forces these people to seek medical advice. For this reason, any change in intestinal habit, indicated by increased number of stools, mucous diarrhea, or any of the phenomena of obstruction, however slight, should warrant an im-

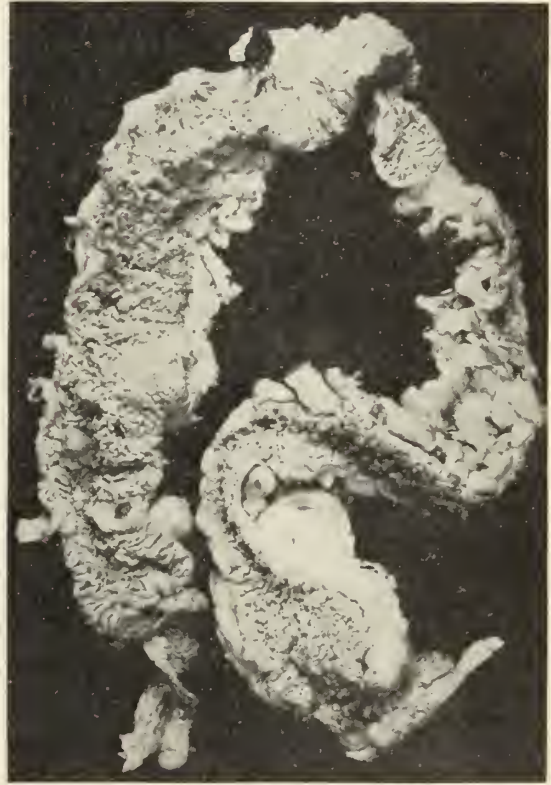


Fig. 6. Colon resected for polyposis.

One should consider the two sides of the large bowel, symptomalogically, physiologically, and embryologically, as separate organs. The right half, around to the middle of the transverse colon, is an absorptive organ and is developed with the small bowel from the midgut. More than three-fourths of the fluids are absorbed from this portion of the bowel, and this function, together with the type of pathologic change found, produces entirely distinct symptoms from those of disease in the left half. Growths in the right half are large, ulcerating, open, and are covered with gray, stubby protuberances, making ideal sites for absorption. Placed on the lateral wall most frequently, and failing to encircle the intestinal lumen, they do not cause obstruction, but give rise to disturbances of physiologic activities, as indicated by anemia, intoxication and de-

hydration. Three main groups of symptoms characterize carcinoma of the right half of the colon. The first is the type characteristic of chronic indigestion, commonly extending over a long period, with mild symptoms of irritability that are referable

walk up a flight of stairs; he complains of shortness of breath and muscular weakness long before it is realized that there is a serious underlying cause. To distinguish cases of this group from cases of primary anemia is more essential than to make the



Fig. 7. Large polypoid carcinoma in the transverse colon.



Fig. 8. Small, annular carcinoma of the transverse colon.

to the right iliac fossa or to the region of the gallbladder. The patients have slight tenderness on pressure, without very much localizing pain, and usually a diagnosis of chronic appendicitis or chronic cholecystitis is made. Indeed, it is as often that one finds a patient with carcinoma of the cecum who has been operated on for appendicitis as that one finds a patient with carcinoma of the rectum who has been operated on for hemorrhoids. The second group of symptoms common to carcinoma of the right half of the colon is that characterized by anemia, without visible loss of blood. The condition is slowly progressive and frequently mistaken for carcinoma of the stomach or primary anemia until its true character is revealed by fluoroscopy and adequate studies of the blood. The loss of blood is without visible hemorrhage; the weakness is insidious and progressive; the patient often finds himself unable to attend to his duties or to

customary distinction between carcinoma of the stomach and primary anemia. The third group, which comprises about 10 per cent of the whole, is the accidentally discovered tumor in the right half of the abdomen found by the patient himself or discovered in the course of a routine examination.

Contrariwise, on the left side of the large bowel, between the rectosigmoid juncture and the middle of the transverse colon, some type of obstructive phenomenon calls attention to the presence of an organic lesion. Pathologically, these lesions are scirrhous, encircling, signet-ring in type. These conditions, added to the fact that the content of the bowel is formed and solid, that the lumen is two to two and a half times narrower than its fellow of the opposite side, and that the intestinal wall is thicker and less elastic than that of the right half, together with the fact that the physiologic function of the left half of the colon is that of a storehouse

rather than that of an organ for absorption, combine to produce phenomena of obstruction, secondary to slow stenosis of the lumen. There is a small group of cases of carcinoma of the left half of the colon in which the first symptom noted is acute obstruction. It comes on out of a clear sky, without premonitory warning, and entirely unsuspected by either patient or physician. If one can localize the obstructing lesion to the colon by any means whatever, excluding intussusception or hernia, the chances are nine out of ten that the obstructing lesion is a malignant growth in the left half of the colon, usually at the rectosigmoid or in the lower part of the sigmoid. Diagnosis of carcinoma of the rectosigmoid and of the sigmoid below the juncture of the lower third with the middle third, is more satisfactorily accomplished by proctoscopy than by roentgenology.

If I might epitomize the diagnostic evidences of carcinoma in any segment of the colon, I would urge that the most significant early symptoms usually manifested are as follows: (1) change in intestinal habit as evidenced by increasing irritability of the bowel, such as some type of diarrhea, usually called by laymen "mucous diarrhea," or alternating periods of diarrhea and constipation; (2) localized pain or tenderness, not of marked severity but without tendency to disappear; (3) tumefaction; (4) anemia not associated with visible loss of blood; (5) blood in the stool or on the stool, and (6) obstruction of acute, subacute or chronic variety. Again, I would urge that symptoms such as marked loss of weight, cachexia, wasting, dehydration or desiccation, are not at all symptoms of carcinoma of the large bowel at any stage in which one can interfere successfully by any type of therapy, but, rather, convincing proof of advanced lesions, with metastasis, in which the outcome from any type of treatment is certain. Admittedly, certain combinations of signs and symptoms that have been described are fairly diagnostic, but the ultimate conformation, with exact localization and interpretation of the pathologic type of organic lesion, finally rests with roentgenologic examination in expert hands.

CHOICE OF OPERATION AND SURGICAL MORTALITY

The choice of operation on the two halves of the large bowel differs materially, and is

influenced by a number of factors: (1) obstruction; (2) the nature of the pathologic process present, whether it is carcinoma or an inflammatory lesion; (3) hepatic metastasis, and (4) local fixation and attachment of the growth. Although operative pro-



Fig. 9. Extensive carcinoma in the midportion of redundant sigmoid.

cedures to be applied in the two halves of the bowel differ because of anatomic, pathologic and functional differences in the two segments, the fundamental principles applying to resection in both arms of the colon are identical. Always, if present, obstruction and dehydration must be combated; the patient's resistance to infection incident to operation must be elevated, and the ability of each patient to withstand just as formidable an extirpative procedure as possible must be estimated. In the main, it may be said that (1) decompression, (2) rehabilitation, and (3) graded resections are the three important principles to be followed with little deviation. To these factors of safety, I have added, as a routine, the use of intraperitoneal vaccine made from streptococci and colon bacilli, with complete satisfaction, and, I believe, marked enhancement of immediate operative results in a series of more than 800 cases. I would not urge adoption of intraperitoneal vaccination only as the

most important factor in reduction of operative mortality, but I am convinced, from my own experience, that as a step in the sequence of events aimed at elimination or reduction of that most common fatal factor in surgery of the colon, peritonitis, it has

beyond the hepatic flexure by the usual operative maneuver.

Beyond the hepatic flexure, that is, including the transverse colon and down to the juncture of the lower third of the sigmoid with its middle third, the operation of



Fig. 10. Annular carcinoma in the descending colon at the level of the iliac crest, with marked obstruction. Distention, due to gas of the descending colon, just proximal to the lesion may be noted.



Fig. 11. Annular carcinoma obliterating the cecum.

played an important part. Certainly, it is logical to raise the threshold of safety against infection in this manner, and, in combination with decompressive measures and rehabilitative steps, I feel that it is a decided advance.

Selection of surgical procedures for the two sides of the colon differ in that one may frequently do a resection at the primary stage on the left side, but without an anastomosis, whereas on the right side one usually does a side-tracking operation, with subsequent resection. My choice, concerning the right half of the colon, in dealing with carcinoma, hyperplastic tuberculosis, and such lesions, which require extirpation, has been to perform aseptic ileocolostomy between the terminal ileum and the transverse colon. At a subsequent date, usually six weeks later, I have found it safe to remove the right half of the colon around to a little

choice, in my experience, has been obstructive resection. By this I mean resection and obstruction of the bowel at the primary stage of the operation, leaving the two ends occluded with a three-bladed clamp, the same instrument that I use in making an aseptic anastomosis, and allowing this obstruction to continue for forty-eight to sixty hours, depending on how the patient reacts and whether ballooning, distention with gas, or nausea takes place. Let me emphasize that this type of resection should not be undertaken in the face of obstruction from the growth. It must be remembered that the vast majority of colonic growths, particularly those of the left side, produce some type of chronic or subacute intestinal obstruction. To decompress by medical measures has been possible in our experience in more than three-fourths of the cases. By repeated administration of enemas, siphoning of

intestinal content, and purgation by the use of senna in properly selected cases, we have rarely failed to produce chronic or subacute obstruction. Let me emphasize here again, that to dally with a subacute obstruction which is not receding, or to attempt to decompress in acute intestinal obstruction by other than surgical means, is not only foolish and foolhardy but fatal to the patient. However, with satisfactory decompression of the colon, a radical type of resection can be performed on a flat or empty bowel, removing the gland-bearing portion and a wide segment of bowel at the initial stage, with low mortality. In the first series of these cases in which I operated after this fashion, the first operative fatality occurred in the thirty-first consecutive case. This low mortality may be maintained, I am sure, by the continued application of the principles which have been laid down, the most important of which is refusal to resect in the face of obstruction. Should obstruction persist, despite repeated attempts at relief, surgical decompressive measures, such as cecostomy and colostomy, and subsequent resection and anastomosis, are indicated. I believe it is practically always unwise to attempt primary suture in the left half of the colon. The blood supply is uncertain, the intestinal wall is thick and inelastic, and, in my experience, it is more hazardous to attempt primary suture. After the obstructive resection has been completed, the two barrels of bowel project, making a colonic stoma, and an enterotome is used to divide the spur between them, just as in the old Mikulicz operation. Subsequently, this opening made at colostomy usually closes spontaneously, provided the mucous membrane is below the cutaneous margin. If it is attached to the cutaneous margin, closure by suturing the roof of the colonic stoma is comparatively simple.

Mortality following operations on the colon always has been regarded as high, and properly so in comparison with operations on the uterus, breast, and other such organs. Compared to resections of the stomach for carcinomas, however, the initial mortality varies but little. Reduction of mortality to less than 10 per cent in The Mayo Clinic has been accomplished by the introduction and steady maintenance of the factors of safety which I have outlined. Isolation of these patients in a single section, and individualization of each case, as regards selection of the optimal time for operation and the most satisfactory type of operation, has given increased satisfaction. Operability during 1930 in the cases of carcinoma alone was 57.5 per cent, and this, I think, is the standard by which one must judge radical surgery for carcinoma of the colon. If the rate of operability can be raised, or maintained at this level without increase in the rate of mortality (which in our series of 755 cases in 1930 which were submitted to operation for all types of lesions, largely carcinoma, was 8.6 per cent) the number of patients out of 100 living at the end of five years or longer should, and unquestionably will, be raised materially. There is small doubt that recent advances in diagnosis of lesions of the large bowel, particularly by roentgen rays, are bringing a larger group of patients to seek relief at an earlier stage of their symptoms, before glandular and hepatic metastasis or local fixation have excluded the possibility of resection. It is not too much to hope that in the near future more routine examinations of the large bowel, following early and very slight symptoms of intestinal dyscrasia, or as a part of a general examination, will extend the horizon of operability, and, at the same time, that technical advances will reduce the rate of mortality.

WELFARE MOVEMENTS AND THE MICHIGAN STATE MEDICAL SOCIETY

B. R. CORBUS, M.D.†

GRAND RAPIDS

I have been asked to speak on the relation of the Michigan State Medical Society to the various welfare movements now in operation throughout the state, and I would precede what I have to say by letting you look, for a moment, through the eyes of a layman whom you all know by reputation, and some of you personally. He is President of Yale University, James R. Angell. The paragraphs are from an address before the College of Surgeons at their recent meeting:

"I am by no means unaware of the narrow-minded and exclusively self-seeking attitude of a good many practitioners who see in every social movement affecting medicine, simply one more effort to rob them of a livelihood and forthwith devote all their energies to digging in where they are. Their position is like that of labor, which has traditionally opposed all labor-saving machinery, and always, in the long run, in vain."

He continues with a description of the new philosophy which

"conceives the social order as under binding obligation to give its members wholesome conditions of life, protection from needless exposure, whether to climate or disease or moral depravity. It conceives human life as indisputably superior to money or physical property in any form, and it is disposed to suppress or radically modify any agency to practice which appears to be exploiting men for the promotion of merely financial and material gain."

The Michigan State Medical Society has accepted as one of its obligations, to do its part in the education of the people of this State that they may so live that sickness in themselves and their families may occur less frequently, and that when it does occur they may intelligently seek such competent service as the best medical science offers. As a corollary of the last we have established the plan of Post-graduate Clinics that the doctor himself may have brought to him the newer things in medical science, and that he may have the opportunity of brushing up on the older things, in order that he may be prepared to render the service that we are trying to educate the people to seek.

It is very apparent that there exists the need for a broader education of the doctor along social lines. The average doctor, occupied with his daily work, finding his associates largely among members of his own profession, is not sufficiently aware of this strong social movement which is now in the air, and of which Dr. Angell speaks, nor is he sufficiently conscious of the attitude of

the people, even those among whom he works. It is not entirely the fault of the medical profession that the machinery of furnishing the best service at a price within the means of the individual, has not kept pace with the educational propaganda which has caused the public to demand such service.

Dr. Angell said further:

"Of one thing we can be sure, and that is that in the long run, by hook or crook, society will demand competent medical and nursing service, adequate in amount, to meet the needs of everyone. If it cannot secure these as the result of measures voluntarily devised and perfected by the profession and its interested friends, it will look to other agencies, and notably to the Government, to produce the desired results. With political methods and conditions what they are now in the United States, it is difficult to contemplate such a solution without the gravest misgivings."

It would be a terribly serious thing if we were driven to the acceptance of such a miserable plan of practising medicine as the doctors of England have been forced to accept through the panel system. There are, of course, many reasons, chief of which is the temperament and independence of the average American, why such a system would not be acceptable in this country. But, nevertheless, the danger does exist, and if the situation is not met with intelligence by the profession at large and by their spokesmen, the leaders of the profession, some sort of state medicine is not unlikely to be established. Even at the present time, state medicine is edging its way in and is not to be entirely kept out, but if we cannot keep it out it is well that we accept it where we have to and guide it where we may, that the abuses may be as limited as possible. In my opinion such philanthropic organizations as The Children's Fund of Michigan and The W. K. Kellogg Foundation, whose representatives have today spoken to you, offer a

†Dr. B. R. Corbus is chairman of the executive committee and the Council of the Michigan State Medical Society.

real defense to the State Medicine movement. Willing and anxious to work with the profession, desiring to protect the profession wherever it is possible, having on their advisory boards representatives from various professional groups, they want to work with the doctors, not forgetting that the main objective is the improvement of the living conditions and the health of those children and adults in our state who are at the moment suffering from a lack of opportunity.

A layman writing in one of our recent magazines, commented that:

"Mankind has profited so much from the doctor's knowledge that we have come to consider good health our national right and to resent illness as a personal insult. We expect our doctors to be more than the limited human beings that we know ourselves to be, for we expect them to insure to us a life happy and devoid of pain, and if circumstances which neither we nor they can control, produce ailments which irk or hurt us, we blame the medical profession first of all."

But as someone else has said, "Medicine costs too much. Its rewards to those who follow it are too small and it does not achieve all that it ought to." So we have on the one hand a demand on the part of the public that somehow, through the doctor certainly, health must be guaranteed to them, and on the other hand, the doctor, quite willing to carry a degree of responsibility, feels that the criticisms directed against him are, for the most part, quite unjust, and the load that is placed upon him quite unreasonable as compared with the philanthropic load that is placed on other individuals in the community. He sees an increasing encroachment upon his income by clinics of many types. He sees in good times, advantage being taken of the many opportunities for free service by those who are *not unable* to pay a fee. In times of depression, when he sees these things occur, it hits him doubly hard and gives rise to an unrest and a dissatisfaction with things as they are. He does not know where to turn. He cannot see the way out. He does not want state medicine. He does not like the idea of taking a salaried job and losing his independence. He gives his services freely to clinics, but he resents the fact that little credit goes to him and much to the lay people who control the clinic. He resents, with justice, the fact that this lay control functions without seeking any advice from him even though medical policies

which most vitally affect him are under consideration. Yet he does not individually assert himself, but goes along doing his job, saving the most of his grumbling and his protest for fellow members of the profession over the lunch table and in the cloak room of the hospital.

He suspects that there are too many physicians, but he knows that there are not five times too many physicians in this country, as someone has said. He thinks it is ridiculous that, after all his training, the average income of the doctor in good times should not be more than three thousand dollars a year. He believes that if quackery could be shut out things might be different, but he is told that there is relatively much less quackery today than there has been in the past. All these things he knows. What he does not know is what to do about it.

If he is the average general practitioner who lives in Detroit, and times are good, he works sixty-one hours a week. He has invested heavily in his education, and his returns are most modest. In times such as these his hours of work are fewer, and his financial returns are by no means commensurate with these lessened hours. Collections, quickly affected by limitation of employment, grow more and more difficult as unemployment continues. The situation is serious,—more, it is acute.

I am not here to give an answer to the problem. Wiser heads than mine have been for some time studying it, and the answer is not even begun to be found. We are sure that the answer is not to be found through governmental paternalism or by any method which proposes to treat the people *en masse* and which disturbs the personal relation of the physician to his patient. Of one thing I am certain,—that an aggressive attitude to all clinics, good and bad, and laymen groups and governmental bodies whose objective is the care of the sick, would be as futile a gesture as Don Quixote's attack on the Windmill. Moreover, such warfare opens up a barrage of criticism from the lay public and is certain to be detrimental to our professional body. Even though the group activities justify the most severe criticism an aggressive warfare, proceeding in a militant, intolerant manner, rarely succeeds in accomplishing a reform. One reason for this lies within ourselves. We are not sufficiently cohesive. There seems to be always someone among us willing to overlook the

methods employed, in his desire for direct financial gain, for increase in practice, or social advancement. If the abuses associated with the conduct of medical charities are not to be corrected by an aggressive attitude then how may such abuses be corrected? I should say, from my observation over the last ten years in Michigan, that the most potent force resides in the county unit. The abuses which are so bitterly complained of have arisen in organizations which have been started with the very best of intention and have occurred by reason of a well-intentioned desire to extend these philanthropic activities, intensified not infrequently by an overweening ambition on the part of a paid secretary to make a showing.

As a general rule it may be said that the directors are honest minded individuals who would be most willing to discuss the situation with some of the prominent members of the local medical society, always provided that the approach is made in a proper manner. After all, these individuals cannot help but recognize their dependence upon the physician, nor can they fail to realize that the doctors' interest in the social and health welfare of the community is at least equal to their own.

Your officers and Council have been for some years, and are now, most appreciative of the fact that the most important problem with which organized medicine has to deal is the relation of the profession to the public. We are concerned about the economic problem as it confronts the doctor, and we believe that the economic problem is most intimately connected with the attitude of the public towards the doctor. We would, so far as we may, direct educational propaganda to the public that they shall more clearly recognize the obligation that they have to the doctor; that they shall more properly evaluate his services to them personally and to society as a whole, and in general bring them to a realization of the extent of their dependence upon him for good health and happiness. We would, too, do our part in making the doctor more competent to fulfill the obligation, and would impress upon him that he, in turn, has a responsibility to the social body beyond his responsibility to his individual patient. As the county unit should proceed with a campaign of education most particularly directed to those lay organizations who are conducting medical clinics, so we endeavor, in a

larger way, to guide where we can the conducting of organizations whose interests are medical along the lines of ethical practice, protecting the doctor as much as we can from unreasonable encroachment, not forgetting that for the most part these organizations have been formed for the very legitimate purpose of helping in one way or another, those individuals who need medical help and who have not the opportunity to get the help that they require.

At the last meeting of the House of Delegates the president was directed to appoint a committee to survey the professional and economic problems associated with the different charitable and governmental activities within the state which in one way or another impinge on the private practice of the physician. The resolution, as presented, has given rise to newspaper comment of a very critical nature, and it may be expected that the activities of the committee will be watched most carefully. It may be questioned whether in the limited time at their disposal and the limited amount of money available, the survey can be extended to cover the broad territory laid down in the resolution. The committee, however, is wisely chosen, and it may be expected that they will be able to bring to the special meeting of the House of Delegates some constructive report.

The officers and Council are watching closely the activities of the Committee on the Cost of Medical Care, as well as those of other organizations who are making a study along lines which are of such interest to us. We are conscious of the movement, largely developmental, which will probably quite materially change the character and type of medical practice for the coming generation. We want to have our finger, feeble as it may be, in the pie.

We have, most of us, found a real satisfaction in the practice of medicine. We have been willing to work hard on incomes which have been very much less than those of our friends in the law or our friends in business. We have found, in many instances, so much satisfaction that we would be content and proud if our sons should decide to carry on where we leave off. We would want them to do their part in not only relieving the aches and pains of individual patients, but we would hope that through them childbirth might be made more safe, that

tuberculosis might be quite stamped out, that smallpox and typhoid would be unusual diseases, and old age deferred; in short, that they may succeed where we, in many ways, have failed. But if medical practice is to be directed by the government, if there is not to be independence of thought and action, if a decent living is not to be obtained,

then there is no incentive for a young man to struggle through the seven hard years of college that he may continue to struggle through the rest of his life. We hope that wise heads may be successful in directing the evolution, if evolution may be directed, to the best interests of both public and doctor.

PLASTIC SURGERY: ITS PSYCHOLOGICAL ASPECTS*

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Personal appearance and physical fitness are important factors in maintaining morale. This fact, long since recognized by military and business leaders, has its application in medicine as well. "A sound mind in a sound body" and "Health and happiness" have become medical aphorisms. Success and failure are determined to a great extent by personal happiness, which is dependent to an important degree upon physical well-being. The extent to which congenital and acquired infirmity and deformity play a part in determining personality is well illustrated by countless examples in history, literature and in contemporary life.

Boswell's "Life of Johnson" is a striking commentary on a life of mental suffering endured by the Great Lexicographer, occasioned by his grotesque scrofulous countenance. The bitterness which he felt toward humanity, his many idiosyncrasies, his frequent "fits of the spleen" are an expression of the anguish felt by a sensitive nature seeking flight from the tortures of grim reality. Michelangelo's sorry features, which resulted from a boyhood encounter, were a constant source of irritation to him and ridicule from his contemporaries. His fits of depression, his polemic attitude toward life and his associates, and the grotesqueness which he imparted to his sculptured figures doubtless reflect a wounded pride. Byron was constantly irked and extremely sensitive because of his club-foot. Cyrano de Bergerac failed to win the beautiful Roxane because of a misshapen nose. Louis the Fourteenth decreed a new fashion in footwear to make less obvious his ungainly feet. Steinmetz. "The genius of Schenectady,"

lived the life of a recluse because of his bodily deformity, and Beethoven's pock-marked countenance and eventual deafness were responsible for his unsocial conduct; Victor Hugo's "Hunchback of Notre Dame" portrays a creature driven to crime and cruelty by the bitterness he felt toward his unhappy fate. There are few characters in fact and fiction who bore their afflictions with the calm resignation of Tiny Tim.

Less illustrious though equally unhappy examples may be encountered in everyday life—individuals who are unable to bear with equanimity or indifference their physical afflictions. The ravages of the Machine Age, with its ever-increasing number of accidents and injuries, are adding to the rising toll of the unfit and the misfit at a time when the struggle for existence has reached new heights, when competition is ruthless, and individualism is the order of the day. In this struggle for the survival of the fittest it is not surprising to note an increasing interest in the acquisition of every available asset, not to the least of which is the psychological effect of good physical appearance, for appearance, like apparel, "oft proclaims the man."

Individuals, of course, differ greatly both in sense and sensibility; some are able to ignore at will deformities which to others constitute an insufferable calamity. To the

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psychologist, however, this apparent heedlessness, affected by some, is often but an easily penetrable mask which covers a patent attempt to overcome an inferiority complex. These feelings of inferiority, Adler

differs radically from that of normal children. Involved at an early age in a struggle for existence they experience a definite strangulation of their social feelings. They lack interest in the affairs of others, become



Figures 1 and 2.

The operation in the case of the above patient consisted in removing the "hump," raising the nasal tip and shortening the nose.

believes, have their basis in inferior organs: scar formation, according to Adolf Meyer, is an important causative factor in the development of traumatic psychoneuroses. Under the strain of prolonged psychic distress, no matter how successful the attempt at its subjugation, personalities must suffer. How many capable individuals have become hypochondriacal, or have withdrawn from society to take up the unhappy existence of a recluse, and how many lives have thus been diverted from useful service to society will never be known.

The function of plastic surgery in habilitating this large group of unhappy mortals, enabling them to gain their desires for physical fitness and establishing them in society on an equal physical footing with their fellows, is still little understood by many physicians. Any deformity or blemish, however slight, which constitutes a source of distress to the patient should be corrected whenever possible. Modern scientific plastic surgery has a wide scope. Its service in the field of mental hygiene has as yet not been fully appreciated by the profession at large.

The psychological effects of congenital abnormalities begin to manifest themselves early in childhood. In his book, "Understanding Human Nature," Adler points out that children with congenital deformities acquire an attitude toward their fellows which



Figures 3 and 4.

Industrial accidents are increasing the ranks of the physically and mentally unfit. The loss of an eye as the result of a burn made this individual a social recluse. Restoration of the eye socket and the insertion of a well-matched artificial eye did not completely relieve his mental state until transplantation of hair-bearing skin to each lid, gave the appearance of normal eyelashes.



Figures 5 and 6.

"Lop ears" not infrequently occasion chagrin. The removal of excess skin and cartilage behind the ears corrects this condition and leaves no noticeable scar.

introspective and preoccupied through contemplating the impressions they make upon others. Many of them voluntarily avoid social contacts, develop a bitter outlook upon life, and, as a result of ridicule from thoughtless fellows, develop decided feelings of inferiority.

Only recently a mother informed me that her daughter had become aware of her hare-lip when little more than a year of age, and, on several occasions, had been observed in the act of contemplating this deformity in

the mirror and noting the effect of approximating the ununited parts with her fingers. This child, when operated upon at the age of eighteen months, had already gained a painful mental impression of her abnormality. Another child with a double harelip



Figures 7 and 8.

Constant brooding over an imagined or slight deformity, such as the receding chin of this patient, resulted in a serious mental change. He imagined himself to be an object of curiosity and ridicule, and had consulted several physicians regarding the possibility of correcting this receding chin. Their ridicule and failure to appreciate his mental attitude only added to his discomfiture. A rib cartilage transplant to the front of the chin produced a cosmetic improvement and a decided mental change.



Figures 9 and 10.

Simple harelips may be operated upon in the first few days of life. Early operation relieves the mother of mental anguish and embarrassment and insures a more normal mental development of the child.

always lifted the bedclothes to cover its face when persons entered the room. A six year old child with a single harelip covered her face or secluded herself at the approach of strangers. These facts emphasize the necessity of early operation, before the time when painful mental impressions have left their stamp upon the personality.

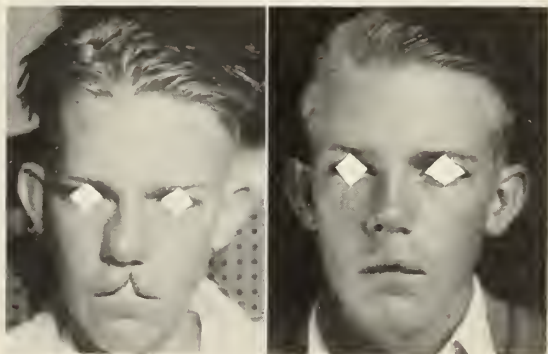
Simple harelips may be corrected safely within the first week of life. Ether anes-

thesia is readily tolerated. Fed with breast milk by means of the medicine dropper during the first few days after operation, these patients are able to nurse from the breast* on the seventh day when the sutures have been removed. Early operation is also a great



Figures 11 and 12

Harelip deformities associated with cleft palates should be corrected during the first few weeks of life, at a time when the maxillae are soft and permit easy moulding of the upper jaw. Closure of the soft palate should be delayed until the age of two years, the time when intelligent efforts at speech are first made.



Figures 13 and 14.

The sensitiveness of individuals who carry congenital deformities to adult life is obvious. The transformation in the mental outlook after operation is as striking as is the change in personal appearance.

boon to the mother, since it enables her to leave the maternity hospital with her baby free of the gross deformity which would otherwise have been a source of mental anguish and embarrassment to her.

Children with complete cleft palate deformities are unable to nurse properly and must often be subjected to two operations before the lip and alveolar arch can be properly closed. Such cases should also be corrected during the first few weeks of life, at a time when the maxillary bones are soft

and permit easy moulding of the upper jaw. Closure of the soft palate can best be accomplished at the end of the second year, the time at which intelligent efforts at speech are first attempted. The tissues at this time have greater strength and the re-

these individuals when they realize that they are able to associate and converse with their fellows without embarrassment to themselves. A successful plastic operation is often more deeply appreciated than one which saves the life of the patient whose ex-



Figures 15 and 16

Disfigurements resulting from accidental injuries because of their sudden acquisition impart a mental shock so acute that the individual becomes unable to effect adequate psychological adjustments. His mental anguish is usually imperfectly masked by an apparent show of indifference.



Figures 17 and 18.

An automobile injury resulted in the production of a saddle nose in this patient. For two years following the accident the patient attempted to mask her deformity by wearing a bandage in spite of the absence of an open wound. A cartilage transplant corrected the deformity and relieved her obsession.

sults obtained are superior to those which follow attempts at closure during early infancy. This operation should always be supplemented by special speech education to prevent "cleft palate enunciation," a handicap which is often mocked by other children. Speech education is an important feature in the postoperative management of adults as well. Under proper guidance the results are striking; there is no greater gratification in medicine than to observe the mental metamorphosis which takes place in



Figures 19 and 20.

A septal abscess following erysipelas during childhood resulted in the production of a saddle nose deformity in this individual. A cartilage transplant transformed both physical appearance and mental aspect.



Figures 21 and 22.

Intercollegiate athletics resulted in a "pugilist type" nose which was a source of great embarrassment when he attempted to engage in a business career, where personal appearance is commonly a deciding factor. The correction of the deformity gave him a more genteel appearance.

istence has been a burden occasioned by deformity.

The psychological reactions to acquired deformities are often more intense than those which follow congenital disfigurements. Time has taught the congenitally deformed individual to make adjustments which are often sufficiently artful to conceal the unhappiness which he harbors in disguise. Acquired deformities, particularly those contracted during adult life, present more serious problems. Their sudden, unexpected occurrence brings a mental shock

which is so acute that adjustments are often quite impossible. The individual is like a ship lost at sea, or a mariner stranded on a desert island. Social, economic, and emotional factors render his lot a pitiable one. Afflicted at a time when social status, out-

an ever-present source of worry and distress to the bearer.

Facial deformities, because they are concealed with great difficulty, and because they jeopardize more seriously the appearance of the individual than do defects of the same



Figures 23, 24, 25 and 26

The extent of the deformity often bears no relationship to the degree of mental anguish suffered by the individual. The cases illustrated depict patients with slight deformities who for years had been painfully aware of their condition and had made numerous requests for their correction, which had always been refused. Plastic operation in each case improved the appearance and added to their happiness.

look on life, habits and interests have often been formed and crystallized, the prospect of an existence bereft of every semblance of its former self becomes unbearable. Our modern mode of living, with its long train of accidents and injuries, is leaving in its wake a rising toll of individuals who are maimed physically as well as mentally. Although the deformity is often less disfiguring than the patient imagines it to be, the handicap imposed by the imagination makes every possible attempt at its correction essential to the well-being of the individual.

Many disfigurements due to scar formations following injuries may be avoided by proper attention to the principles of plastic surgery at the time when the injury is first treated. The accurate approximation of wound edges, a judicious selection and use of suture materials, and, above all, careful attention to anatomical relationships are factors which the average practitioner commonly ignores in the hurry and excitement of the emergency. Time will do much to eliminate the traces of scars in most parts of the body. Those of the face, however, are disguised and concealed with great difficulty. Subjected to the constant scrutiny of the patient and the daily, though casual observation of associates, these blemishes are

degree involving other parts of the body, are the most common disfigurements which give rise to psychic distress. A slight facial deformity frequently produces a psychological effect which is out of all proportion to the extent or appearance of the lesion. A saddle nose suggests to the patient the appearance of a pugilist, or even the stigma of syphilis. Receding chins, overhanging lips, lop ears, and hook noses are reminders of characters appearing in the comic strips. Any real or fancied resemblance to such caricatures is certain to produce a strong feeling of aversion and bitterness in some individuals, and the stamp which this unhappiness may leave upon the personality and mental outlook warrants serious consideration. A distorted personality is too great a price to pay for grotesque features which may be transformed by simple plastic procedures.

Much harm has come in the past through failure on the part of the medical profession to recognize the psychological aspect of deformities. Physicians have too often been unaware of the serious handicaps imposed upon these individuals, not merely by physical appearances, but more especially by mental reactions which affect their personalities, social status and means of livelihood. To re-

gard these disfigurements, congenital or acquired, as "acts of God" and to counsel patient resignation is to impose a task of which these patients are mentally incapable. A proper appreciation of the fact that these unfortunate individuals are at the same time

mentally unwell, will enable the physician to advise the treatment which will remove both physical deformity and mental distress. Plastic surgery thus plays an important part in mental hygiene.

1713 David Whitney Bldg.

THE CONSERVATIVE OPERATIVE TREATMENT OF HYDRONEPHROSIS*

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The value of any method of treatment is judged, first, on its effectiveness in relieving symptoms, and, second, on its ability to conserve or restore function. His symptoms are the chief concern of the patient—pain in the case of hydronephrosis—and any treatment which relieves the pain is successful in his eyes. But it is our concern to make use of methods which are truly conservative as well as pain-relieving. The accepted treatment for advanced hydronephrosis has been nephrectomy ever since nephrectomy became a standardized procedure. But if we define hydronephrosis as any pathological dilatation of the kidney pelvis, it is obvious that there are several grades of hydronephrosis, and all grades of renal damage associated. As early as the eighties there was dissatisfaction with as radical a procedure as nephrectomy for the more moderate grades, and various plastic operations were devised by some of the leading surgeons of the time to correct the underlying cause of the condition, and relieve the symptoms, without removing the kidney.

In many instances these were successful; but there were also many failures, partly, it is probable, because of the lack of facilities for thorough preoperative diagnosis. The first ureteral catheterization in a male was in 1893, though Kelly had previously catheterized them in women; the X-ray was discovered in 1896; and a practical method of outlining the renal pelvis was not found till 1908; a little later came reasonably dependable tests of renal function. So it can be seen that only in the past two decades have we been in a position to make accurate preoperative diagnoses of surgical conditions of the kidneys.

The common sense view is that hydronephrosis is due to obstruction, which may be anywhere between the renal pelvis and the

bladder. Most of the advanced hydronephroses are due to obstruction in the vicinity of the uretero-pelvic juncture, and the earlier surgeons confined their attention to this region. Modern methods of diagnosis have demonstrated other obstructions—usually strictures of the ureter or stones,—but these rarely lead to the extreme grades of hydronephrosis seen with the other conditions, and the treatment of these is quite well standardized, dilatation being possible for nearly all strictures of lower ureter, and stones, of course, being removed either by manipulation or operation.

But strictures in the vicinity of the uretero-pelvic juncture or of the juncture itself do not yield readily to dilatation from below, and consequently, in certain instances, we are faced with the same problem which faced the earlier surgeons—namely, how to relieve the patient of his symptoms and at the same time not deprive him of functioning renal tissue, which he may need in the future or of which he is in evident need at the time. It is obvious that when the function of both kidneys is reduced it is desirable to conserve the remaining function and that therefore nephrectomy is contraindicated. It follows therefore that the mere determination of the presence of hydronephrosis does not constitute a satisfactory diagnosis—it is necessary to determine in ad-

*Read before the Surgical Section, 111th Annual Meeting of the Michigan State Medical Society, Pontiac, Sept. 23, 1931.

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dition the cause of the obstruction, the amount of function remaining in the affected kidney, and the functioning power and anatomical condition of the opposite kidney.

The importance of this is well illustrated by the following case:

lography have given rise to hesitation about its use, particularly its bilateral use; but now, in most instances, sufficient information concerning the supposedly uninvolved kidney is given by intravenous pyelography, and this is free from those objections to or-

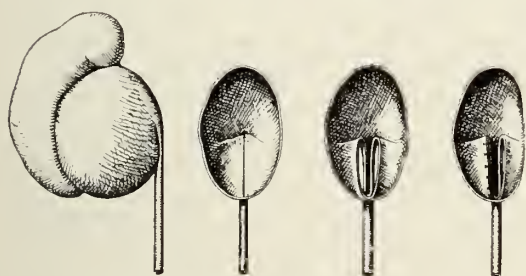


Abb. 3. Trendelenburgsche intrapelvine Spornoperation.

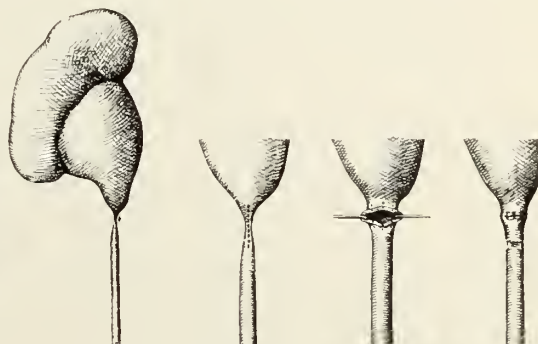


Abb. 1. Frayre'sche Operation bei Striktu.

Figs. 1 and 2. (After Oehlicher)

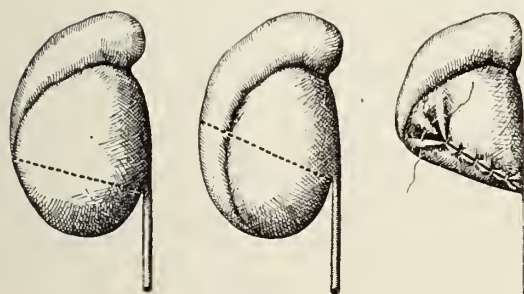


Abb. 6. Resektion des Nierenbeckens. Ortopädische Resektion nach Albarin. Faltung des Beckens nach Israel.

Fig. 3. (After Oehlicher)



Fig. 4. (After Schwyzer)

The patient was a woman of 39 who had recurrent attacks of left sided pain. A moderate hydronephrosis was found. The situation was explained to her and the possibility of a plastic operation brought up, it being explained to her that it might be necessary to perform nephrectomy later if the plastic operation was unsuccessful. She decided for primary nephrectomy. Since the function of the right kidney was within normal limits no pyelogram was made of the right kidney, and a left nephrectomy was performed. A year or so after operation she began to have somewhat similar attacks in the right side and we found an early hydronephrosis there.

In this instance if we had determined accurately the condition of the supposedly unaffected kidney we should probably have found that it showed early hydronephrosis, and this would have modified our attitude—we should have insisted that a plastic operation be tried rather than yield as we did to her desire for certain and immediate relief of her symptoms.

In the past, the discomfort and the occasional severe reaction associated with pye-

linary pyelography. We may say that with the methods of investigation at our disposal we are in a position to make diagnoses as described above, accurately, promptly and with little inconvenience to the patient. It may be impossible to determine beforehand the exact cause of the hydronephrosis, but it can be determined with sufficient accuracy to permit operation, the missing information being supplied at the time of operation.

The higher obstructions are the ones that concern us here—strictures of the upper ureter—strictures of the uretero-pelvic junction, aberrant vessels, etc. An additional factor is introduced by the enlargement of the pelvis itself. As this dilates, the entering point of the ureter into the pelvis ceases to be at the lowest point and a spur or valve is formed, which, due to the internal pressure within the pelvis, may be the cause of further obstruction.

The earlier plastic operations were concerned with the redundant pelvis, the constriction of the uretero-pelvic juncture and with this spur or valve, and the methods used consisted of:



Fig. 5. Case 2.

has been introduced with the exception of a new method of treating the strictured juncture, contributed by Schwyzer; but certain additions have been made to the operative procedure, which seem to make the differ-



Fig. 6. Case 3.

1. Transplanting the ureter into the lowest point of the pelvis.
2. Slitting the valve or spur, thus lowering the point of entrance of the ureter.
3. Incising the constriction and suturing transversely.
4. Excising a portion of the redundant pelvis.
5. Plicating the pelvis.
6. A combination of two or more of the above.

The names associated with these operations are Trendelenburg, Fenger, Israel, Albarran, Küster and others, including Howard Kelly. In 1906 Schloffer was able to find eighty-six cases reported in the literature with a failure rate of about 30 per cent, and a death rate a little higher than for nephrectomy (Figs 1 to 4).

A new era commenced with the introduction of pyelography in 1908, but very little new in the way of plastic operative method

ence between success and failure in certain cases. Peck introduced a method of splinting the ureter and pelvis by passing a catheter through the renal parenchyma down into the ureter and leaving it for several days. Several surgeons have practiced nephropexy in addition to the plastic procedure, and it seems to be a valuable procedure. Quinby of Boston has been much interested in obstruction due to aberrant vessels. As these vessels are end-arteries their section is undesirable if of any size, for this causes infarction of the portion of the kidney supplied. In a large number of cases he has successfully practiced cutting the ureter from the pelvis and reimplanting it into the pelvis on the other side of the vessel, with complete relief of symptoms.

In the modern period there have been many cases of plastic operations reported by Peck, Quinby, Geraghty and Frontz, Young, Hinman, Braasch and Walter, von Lichten-

berg, Papin and others, with a percentage of failures and death less than in the preceding period. And as we review the cases reported it would seem that these plastic operations are successful sufficiently often

younger the patient, the more important is conservation of function.

Nephrectomy undoubtedly gives the surgest and quickest relief of symptoms, and may be preferable in certain cases otherwise



Figs. 7 and 8. Case 4.

to justify their use in suitable cases. And each instance of preservation of function with relief of symptoms is a triumph of conservative surgery. However, suitable cases are not common and these operations should be used cautiously and only with due consideration of all factors present—age, financial status, physical condition, and the condition of the opposite kidney.

The condition of the opposite kidney has already been considered, and is of course the most important determining factor. If it is badly damaged, removal of the other kidney is contraindicated, if capable of functioning at all; on the other hand if it is normal and capable of carrying the whole load, the surgeon is given more freedom of choice as to mode of treatment and can take into account other factors such as age and financial status, etc. The age is important, for the

suitable for plastic operation, for example if the patient is in later life, or if his financial status is such that too great a burden would be laid on him by the possible added expense and time loss incident to a second operation, in case of failure of the first.

In these cases the after-treatment is important. If infection is not present before operation, it may be afterward, and dilatation of the ureter and lavage of the pelvis are indicated and should, where possible, be repeated at intervals till conditions are satisfactory. Restoration of the anatomical condition to normal cannot be expected, but freedom from infection can be arrived at in most cases.

We have had five cases of this sort which I should like to present briefly: Four of these were successful and one a failure.

Case 1.—The patient was a young married woman,

twenty-seven years old. A stricture at the ureteropelvic juncture was incised and sutured transversely, as in the Heinecke-Mikulicz operation. The symptoms have been unchanged, and there has been no opportunity to follow the function or infection. A stone may have been overlooked in this case.



Fig. 9. Case 5.

Case 2.—The patient was a married woman 40 years old. Her right kidney had been removed for hydronephrosis in 1925. Later there occurred intermittent pain in the left flank and there was found to be early hydronephrosis of the left kidney. There was 60 c.c. residual urine in the pelvis and the two-hour phenolsulphonephthalein output was 20 per cent. At operation in 1928 there was found to be sharp kinking of the ureteropelvic junction, the ureter entering the pelvis above the most dependent portion. From the junction, incisions were made in the ureter and pelvis running to the most dependent portion of the pelvis, and the corresponding edges of the pelvis and ureteral incision were sutured together and nephropexy was done. Two months later the residual was 20 c.c., the urine was clear, cultures showed no growth, and the two-hour phenolsulphonephthalein output was 50 per cent. Pyelogram was a failure. She has not been seen since then but reports by letter, almost two years after the operations, that she feels quite well. (Fig. 5.)

Case 3.—The patient was an unmarried girl of nineteen. For two and a half years she had complained of constant dull pain in the left flank with occasional acute exacerbations. Pyelogram showed early hydronephrosis. At operation in December,

1927, the ureter was found entering the pelvis above its most dependent portion, kinked sharply and held by adhesions. The adhesions were freed, incisions were made in the ureter and pelvis from the junction down to the most dependent portion of the pelvis, the corresponding edges sutured together and nephropexy done. There has been complete symptomatic relief, and ten months after operation her urine contained no pus. There has been no opportunity to make pyelograms or test function. (Fig. 6.)

Case 4.—The patient was a man 29 years old, complaining of a dull ache in the left flank. On catheterizing the ureter, obstruction was met in the left upper ureter near the pelvis, and the urine from this side showed a few pus cells. The phenolsulphonephthalein showed as follows: Appearance time—right 2 minutes, left 6 minutes; yield in 10 minutes—right 8 per cent, left 3 per cent. The pyelogram showed pyelectasis and apparent obstruction at the ureteropelvic junction. At operation in August, 1929, there was found narrowing and angulation at the ureteropelvic junction with a mass of connective tissue about it. The connective tissue was cut, the ureteropelvic junction was excised, and the ureter implanted into the pelvis, in such a way that the pelvic wall formed a cuff about the ureter. A catheter was run into the pelvis above the insertion of the ureter and run down the ureter for a distance, the free end extending out of the wound. A tiny stone was removed from the pelvis. He has been treated by pelvic irrigations and on his last visit, eight months after operation, he had been free of symptoms for a long time; there was 35 c.c. residual urine in the left pelvis, the urine contained a very few pus cells, and the indigo-carmin appeared in 3½ minutes on the left and in 3 minutes on the right. Pyelogram was made which showed, however, that there had been no contraction of the pelvis. (Figs. 7 and 8.)

Case 5.—The patient was a man forty-two years old complaining of pyuria, frequency and burning of several weeks' duration. The urine contained pus, no tubercle bacilli found. On cystoscopy the bladder showed a moderate grade of cystitis, no pus was seen in the urine from the right kidney, and there were many pus cells from the left. Phenolsulphonephthalein appearance time—right 3 minutes, left 23 minutes. Ten minute collection showed 8 per cent on the right, and only a trace on the left. Pyelogram was made of the left side, 20 c.c. of sodium iodid being injected. This showed hydronephrosis with obstruction apparently in the region of the ureteropelvic junction. At operation a tight band containing a fairly large artery and vein was found running anterior to the pelvis and down across the pelvis and ureteropelvic junction. The ureter was divided from the pelvis, the pelvis drawn anterior to the vascular band, and the ureter implanted into the pelvis, the pelvis acting as a cuff. A rubber catheter size 10 was inserted through the renal parenchyma and passed down the ureter a few inches, holes being cut in the portion that lay in the pelvis to allow for drainage. The kidney was fixed by one triangular suture. The catheter was removed about the tenth day. About a month later the pelvis was drained by catheter and the urine contained some pus. Following this epididymitis supervened, but a month later the urine was clear, and he was symptom-free. He has not been seen for 2 months. We hope to obtain another pyelogram later. (Fig. 9.)

SUMMARY

1. In selected cases of hydronephrosis plastic operations on the ureteropelvic junction are indicated.

2. Pyelogram of the supposedly uninvolved kidney should be a part of the diagnostic procedure in every case of hydronephrosis.

3. The factors to be considered in deciding between a plastic operation and nephrectomy are (1) the condition of the opposite kidney, (2) the functioning power of the affected kidney and the cause of the hydronephrosis, (3) the age of the patient, and (4) the financial status of the patient.

4. Following a plastic operation all pa-

tients should have the benefit of ureteral dilatation and pelvic lavage.

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TUBERCULOSIS AND REPRODUCTION*

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Tuberculosis apparently does not materially influence the procreative powers of the individuals who are infected with this disease, except in the relatively small group where the genitalia are involved. Even in these cases pregnancy may result, provided the lesions have not caused obstruction of the genital passages.

It is not likely that the male mate has any material influence on reproduction unless the genital organs are infected, under which circumstances he might be sterile or transmit the infection to his wife, perhaps rendering her sterile. It is highly improbable that he could transmit the infection to his offspring unless there is some "ultravirus" or ultramicroscopic form of the tubercle bacillus.

It would be possible for the infant to inherit a susceptibility to tuberculosis from its father.

The woman may be sterile as the result of a genital tuberculosis, she may conceive and abort or otherwise have a premature termination of the pregnancy. Rarely the infection may be transmitted to the fetus through the placenta, producing a fetal or infantile tuberculosis which is of congenital origin. This is a relatively rare condition and need not be considered an important factor in the problem of tuberculosis. The infant is more probably and in the overwhelming majority of cases born free from any tuberculous infection, but may acquire it in early life from its mother or other

neonatal contact. If there is an inherited susceptibility to tuberculosis the infant could undoubtedly derive it from its mother. Forssner is of the opinion that infants born of tuberculous mothers are not infected before birth, but are born as healthy as other children and remain so unless infected from contacts, usually maternal.

It is the prevailing opinion that tuberculosis has little influence upon pregnancy and the products of conception though they may rarely become infected. On the other hand there is a rather widespread opinion that the pregnancy has a harmful influence upon the tuberculous patient. The indications for treatment have been largely based upon these premises.

Forssner, in an extensive article after a consideration of the opinions of various authors, doubts that we possess sufficient knowledge upon which to base scientific conclusions. He raises three fundamental questions, and the following is a quotation from his contribution: "The first question is the most fundamental and on it depends the rest. Does pregnancy, as a rule, have a

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harmful influence on pulmonary tuberculosis and in what cases? The second: Are the children of tuberculous subjects of negligible value or have they some importance in the population? If of value, one should be cautious with regard to abortion; if negligible one should show no hesitation. Finally the third question is: Does abortion increase the chances of resistance to the tuberculous process in the mother? If not, the operation has no justification or at least it should be practiced prophylactically before the pulmonary condition is made worse."

There seems to be unanimity of opinion that pregnancy exercises a harmful influence upon tuberculosis, but Forssner feels that this opinion may be unwarranted. He states: "I do not wish to deny that in certain cases pregnancy seems to cause an aggravation of the pulmonary condition, but I hold that we have not one fact which proves that pregnancy has produced this aggravation, that this aggravation would not have shown itself in any case." He and his collaborators have followed two series of cases in Stockholm for a period of at least one or two years. All are proved cases of tuberculosis. One series was not pregnant during this period of observation and the other group was. He writes: "We have examined 396 cases of pulmonary tuberculosis in which no pregnancy had exercised its influence on the development of their disease. This investigation will show the course of pulmonary tuberculosis during a period of two years in women of the working class in Stockholm, who had not been pregnant either during this time nor in the preceding year."

Of the 396 women, 359 were observed for two years or longer. These are subdivided into Turban's stages, with the following result: one hundred and forty, or 38 per cent, in the first stage; ninety-five, or 27 per cent, in the second; and one hundred and twenty-four, or 35 per cent, in the third stage. Of those in the first stage, eighty-three, or 59 per cent, were improved or stationary, while thirty-eight, or 27 per cent, showed aggravation, and nineteen, or 14 per cent, died. Fifty-three, or 56 per cent, of those in the second stage were stationary or improved, twenty-nine, or 30 per cent, were aggravated, and thirteen, or 14 per cent, died.

The third stage cases remained stationary or improved thirty-three times, or 27 per cent; became aggravated in thirteen, or 10

per cent; and seventy-eight, or 63 per cent, died. He collected a series of 341 cases of pregnant women with pulmonary tuberculosis and of these, 299 were observed for two years following pregnancy. One hundred and fifty-eight, or 52 per cent, were in the first stage; ninety-seven, or 33 per cent, in the second; and forty-four, or 15 per cent, in the third stage.

Of those in the first stage one hundred and twenty-five, or 79 per cent, were improved or stationary; twenty-three, or 14 per cent, were aggravated; and ten, or 7 per cent, died. The second stage cases were stationary or improved in sixty-six, or 68 per cent, of the instances; aggravated in twenty-one, or 22 per cent; and died in ten, or 10 per cent. Of the third stage cases, thirteen, or 30 per cent, were stationary or improved; two, or 5 per cent, were aggravated; and twenty-nine, or 65 per cent, died.

The authors point out that the non-pregnant women presented themselves because they had subjective symptoms, whereas the tuberculosis was discovered in the pregnant women as a part of the routine examination. They tried to eliminate all quiescent cases from their pregnancy series and had 185 cases left, which were observed for two years. Of these, eighty-three, or 45 per cent, were in the first stage and fifty, or 60 per cent, were improved or stationary; twenty-three, or 28 per cent, were aggravated; and ten, or 12 per cent, died. Sixty, or 32 per cent, were in the second stage and twenty-nine, or 48 per cent, continued stationary or improved; twenty-one, or 35 per cent, were aggravated and ten, or 17 per cent, died. Forty-three, or 23 per cent, were in the third stage; eleven, or 26 per cent, were improved or stationary; two, or 4 per cent, were aggravated; and twenty-nine, or 70 per cent, died.

The authors conclude from their observations that: "It is not presuming too much to say that these statistics contradict the thesis that pregnancy exercises a detrimental influence on pulmonary tuberculosis, at least in the case of women in the first stage."

"Our statistics in connection with the second and third stages undoubtedly show a difference in favor of women who were not pregnant the year preceding observation of their pulmonary tuberculosis. This difference is so slight that it might be simply the result of chance. It is not possible, how-

FORSSNER'S TABLES I, II AND III

Observations during One Year	Stage	Number and Per cent		Improved or Stationary		Aggravated		Died	
396 Women *341 Women	I	160	40%	120	75%	36	23%	4	2%
		*183	53%	*157	86%	*25	13.5%	* 1	0.5%
		† 88	43%	† 62	71%	†25	28%	† 1	1%
	II	107	27%	78	73%	23	21%	6	6%
		*109	32%	* 82	75%	*23	21%	* 4	4%
		† 69	34%	† 42	61%	†23	33%	† 4	6%
III	129	33%	55	43%	26	20%	48	37%	
	* 49	15%	* 19	38%	* 9	19%	*21	43%	
	† 46	23%	† 16	35%	† 9	19%	†21	46%	
Two Years									
359 Women *299 Women	I	140	38%	83	59%	38	27%	19	14%
		*158	52%	*125	79%	*23	14%	*10	7%
		† 83	45%	† 50	60%	†23	28%	†10	12%
	II	95	27%	53	56%	29	30%	13	14%
		* 97	33%	* 66	68%	*21	22%	*10	10%
		† 60	32%	† 29	48%	†21	35%	†10	17%
III	124	35%	33	27%	13	10%	78	63%	
	* 44	15%	* 13	30%	* 2	5%	*29	65%	
	† 42	23%	† 11	26%	† 2	4%	†29	70%	

*Pregnancy complicated by tuberculosis.

†Recently pregnant women with active tuberculosis.

ever, to deny that it may indicate a harmful influence of pregnancy on advanced cases of tuberculosis."

They feel that the proof of the harmful influence of pregnancy upon the tuberculous woman is not yet forthcoming, and that the truth has not yet been established. It has been accepted almost as a truism that pregnancy has a harmful influence upon the tuberculous patient.

There seem to be many observers in various countries and clinics who are rather skeptical of the evidence pointing to pregnancy as a detrimental factor in tuberculosis. Barnes, in a recent article based on a study of 410 tuberculous women who were pregnant, concluded that a woman with an active tuberculosis should avoid pregnancy in order to eliminate the work and worry of a baby and to spare the baby the risk of infection. They feel that pregnancy rarely, if ever, has a harmful influence on the tuberculous patient. Abortion is unnecessary in favorable and futile in unfavorable cases and rarely of benefit to tuberculous women.

Matthews and Bryant investigated a series of 1,000 married graduates from Trudeau Sanatorium and analyzed 484 of these cases from which the data was sufficiently

detailed. They believe that pregnancy has a definite harmful effect on the tuberculous woman and the more advanced the disease the more harmful the effect of the pregnancy.

Hill compared 349 cases of pulmonary tuberculosis complicated by pregnancy with 160 controls. The author believes that pregnancy has no appreciable bearing on the tuberculous disease. Rist, on the other hand, believes that pregnancy invariably aggravates the tuberculous process. It is apparent that there is no conclusive and generally accepted evidence regarding the harmful influence of pregnancy upon tuberculosis. No one seems to believe, however, that pregnancy exercises any beneficial influence upon the woman with pulmonary tuberculosis.

There seems to be a more widely accepted belief that pregnancy is not the danger to the tuberculous woman which it was once considered. There is also a gradually pervading belief that therapeutic abortion is neither so frequently necessary nor so efficacious in checking the tuberculous process as it was once thought to be.

My own experience leads me to believe that there are three periods in relation to

childbearing which carry an especial risk to the mother: (1) The first trimester of pregnancy; (2) the immediate puerperium; (3) the period of lactation.

The latter two are also hazardous to the infant unless it is separated from the mother.

One might say that the pregnancy, labor and puerperium are in themselves not harmful to the tuberculous patient, but it is how the pregnancy, etc., are tolerated by the woman. If a woman has nausea and vomiting, with loss of weight and strength during the first trimester of pregnancy, as not infrequently happens, she would naturally have a lessened resistance to the infection. The same symptoms from another cause would produce the same result. Most women show definite weight gain with stimulation of metabolism after the early weeks and months of pregnancy. It is quite conceivable that during this phase the tuberculous woman might have the tuberculous process arrested or even improved.

With labor come other hazards from exhaustion, excessive blood loss with resultant anemia, and the dangers of puerperal infection, all of which factors would certainly have a harmful influence upon the tuberculous process. During the puerperium we may have a continuation of some of the detrimental factors which arose during labor, and if it is permitted, there may be the drain of lactation, with the possible hazard of mastitis and the physical and mental strain of caring for the baby. Continued lactation and the physical effort and loss of sleep incident to continual care of the infant are important agents which are detrimental and difficult, if not impossible, to escape in the families and homes of many mothers.

We may now pass to a consideration of Forssner's second question: "Are the children of tuberculous subjects of negligible value or have they some importance in the population?"

Some statistics seem to indicate that abortions, premature labors, and stillbirths are somewhat more common among tuberculous women. The vast majority go to term and are delivered of babies of normal weight and apparent health. If these infants are not exposed to tuberculous contact they remain healthy and mature normally. This is of extreme importance. Forssner compared two small series of cases. Group one consisted of infants who were taken away from

their mothers and observed for from one to three or more years. Of these, 82 per cent were living and well, 12 per cent died of causes other than tuberculosis, 3 per cent were living and tuberculous, and 3 per cent died from tuberculosis. Group two consisted of infants who were brought up by their mothers. Of these, 52 per cent were living and well, 3 per cent were dead from non-tuberculous causes, 25 per cent were living and infected with tuberculosis, and 20 per cent had died from tuberculosis.

Barnes found in his series of 410 pregnant women that 81 per cent of those not subjected to abortion bore normal infants. Of 324 infants, 82 per cent were in good condition at birth and 6.7 per cent were still-born. In the series of Matthews and Bryant, of 579 infants born alive, 556 were alive fifteen years later, of which 501 were robust, fifty-five not entirely well, and only nine cases had tuberculosis. It is interesting that 71 per cent of these women nursed their babies, but most of them were subsequent to sanatorium treatment.

Their statistics, relative to the outcome of pregnancies, are interesting. Among 778 pregnancies, 199 fetuses were lost, leaving 579 living births. The losses were due to therapeutic abortions 80, spontaneous abortions 101, stillbirths 8, and 10 deaths in the first two hours after birth. It appears from these data that three-fourths of the pregnant tuberculous women may expect to carry through with living children who are apparently normal.

It is important that these infants be separated from their mothers, especially from those who have an open tuberculosis. Over four-fifths of the infants who are separated from their mothers seem to survive without tuberculous infection, while the infants born to mothers with an open tuberculosis develop the disease within a few years in nearly half of the cases if they are nursed and cared for by their mothers.

It is apparent that a pregnancy in a woman infected with tuberculosis is worthwhile from the standpoint of the infant, which has a good chance of survival if properly managed.

The important points are the prevention of prematurity and the strict avoidance of exposure to tuberculous infection from the moment of birth.

The third question of Forssner now presents itself for consideration: "Does abor-

tion increase the chances of resistance to the tuberculous process in the mother?"

He believes that most authorities agree that the pregnancy should not be interrupted in Turban's second and third stages. He therefore discusses only the question of therapeutic abortion in Turban's first stage of tuberculosis. The following quotation expresses his opinion: "For us the question of induced abortion, except in very rare cases where there are humane considerations as well as the tuberculosis itself, is satisfactorily settled. We have shown definitely in our study that a pregnancy continuing till term is no more dangerous for first-stage tuberculous women than for healthy women, and by not interrupting this pregnancy we obtain for the race healthy children just as valuable as other children."

Not all authorities seem to agree with the conclusions given above.

Robinson gives an opinion based on 200 answers to a questionnaire sent to medical specialists in various parts of the world. The conclusion is that therapeutic abortion is indicated only for exceptional cases of early disease, and it should never be employed as a routine practice. Pankow, in a recent article, states his belief that if the tuberculosis is progressive, pregnancy should be terminated before the third month, but not later. Interruption is not indicated in the mild but in the more severe cases, and also for social and economic reasons. Novak agrees with Runge that interruption of pregnancy is advisable in clinically active cases earlier but not later than the fourth month of gestation.

Hornung believes in the interruption of pregnancy where medical treatment fails.

Barnes states that abortion is unnecessary in most favorable and futile in most unfavorable cases; it is rarely of benefit to tuberculous women.

Klemperer thinks interference should be based upon medical and social reasons and that early infiltration, cavity formation and hemoptysis are indications for abortion.

Roloff believes pregnancy should be terminated only in those cases in which pneumothorax is not effective.

Superbi holds that abortion, preferably with sterilization, should be done in progressive cases.

Gellhorn believes that therapeutic abortion is indicated in only a limited number of cases and is of value only in the first three

months of pregnancy. The later termination of pregnancy gives poor results.

Rist favors abortion in exceptional cases and only in the first trimester.

Williams now induces abortion only under unusual circumstances, and where the disease is progressive.

It is easily seen that there is a very conservative trend with regard to the induction of abortion as a means of assisting in the cure of a tuberculosis.

Personally, my opinion is pretty much in accord with those which have been expressed. Whether or not a therapeutic abortion is to be done depends not only upon the reaction of the woman to the tuberculosis, but also upon the way in which she tolerates the pregnancy. If a woman with a latent or active tuberculosis is definitely disturbed by the pregnancy in the early months, it is my opinion that an abortion should be done before such symptoms as the anorexia, nausea and vomiting have reduced her vitality. After the early months the pregnancy seems to act more as a stimulus to the well being of the woman, and there is practically never any indication for the termination of a pregnancy because of the tuberculosis.

There are a number of important questions which thus far have not been considered. The importance of the diagnosis of tuberculosis is paramount. It is, of course, much better to make a diagnosis prior to the onset of pregnancy. There seems to be general agreement that pregnancy is not desirable in the woman with a tuberculosis and should not be permitted for two or three years after a cure. This means the use of contraceptive measures. The question of sterilization also arises, and it is indicated in those cases in which it is inadvisable that any future pregnancies should occur because of the state of the tuberculosis or on account of other conditions associated with it. If the diagnosis has not been made prior to the beginning of pregnancy, attempts should be made to detect it by routine history and examination, including X-ray of the patient during the prenatal period. If found, appropriate treatment should be promptly instituted and carried out through pregnancy.

If it is the exceptional case and abortion is necessary, it is my belief that the question of future pregnancies should be considered, and if they are deemed inadvisable both sterilization and termination of pregnancy

should be accomplished by abdominal hysterotomy and tubal ligation or resection under local or spinal anesthesia.

The management of labor is important; the patient's strength should be conserved and any irritating anesthesia should be avoided, especially ether by any method.

Postpartum hemorrhage seems to be of more frequent occurrence and every effort should be made to minimize the blood loss. Infection of any kind may serve to provoke activity of the tuberculosis, and every means should be utilized to avoid any infection of the genitalia, breasts or other organs. Lactation should be suppressed, and the care of the infant delegated to another, especially in open cases of tuberculosis, not only for the sake of the mother, but also to avoid the risk of tuberculous infection of the infant.

The combination of pregnancy and tuberculosis is not to the best interest of the woman and should be avoided, but when it occurs, conservative, appropriate and prolonged treatment is imperative. The best interest of both infant and mother require their separation, especially when the case is an open one. Lactation should never be permitted. The infant is generally born free of tuberculosis, is very susceptible to

infection during infancy, and should not be exposed to the grave dangers of acquiring tubercle bacilli.

The mother needs rest and the conservation of her energies, and should not dissipate her resources by carrying on the function of lactation and caring for the numerous wants of the young infant.

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SOME EARLY PRINTED DOCUMENTS OF THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF MICHIGAN

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Scattered on a table in a Chicago book store, there was recently encountered a group of pamphlets which had come from the library of an old Chicago resident, whose books were being disposed of at a "sale." Several visitors to the shop were desultorily examining the pamphlets and persisting in throwing them back onto the table in utter confusion, a behavior eminently characteristic of disappointed bargain seekers, despite the attendant's obvious efforts to maintain a semblance of order in the arrangement of the stock. A rather hurried glance over the collection sufficed to reveal that it was composed of old catalogues of schools and colleges, inaugural and valedictory addresses delivered at various American medical schools, and a number of reprints of articles on medical and surgical topics from the periodical literature of over seventy years ago.

It is always a difficult matter to refuse to purchase such a conglomeration of miscellaneous items, so, rather than forego the pleasure of examining each one at leisure, it was deemed best to take them all away, and

to be consoled by the thought that never again would such a fortuity be encountered, and to be satisfied that the lady who "knocks but once" had not been impolitely left standing at the door.

The attempt to assign organic cohesion to a collection of books or pamphlets such as this one, is frequently the starting point of the interesting problem of attempting to establish the identity of the previous owner,

and, if this be determined, the endeavor to understand his purpose in bringing such an assembly of items together then leads to research which may bring to light a few little-known biographical details regarding the collector. It became necessary, then, to try to deduce by whom the recently acquired pamphlets had been gathered, and to what traits of his character they appealed. So, when these brochures, with their attractively colored covers, were examined carefully, it was found that there were included copies of the catalogues of colleges in Michigan, Vermont and Illinois, announcements of medical lectures at the University of Michigan, and many other academic tracts, the various dates of publication of which extended over a period of ten years.

No cohesion was apparent in this heterogeneous lot of pamphlets dealing with schools which were geographically far apart, and with subjects obviously not interrelated. But when they were arranged chronologically, in the order of their dates of appearance from the press, a quite different aspect was encountered. The earliest documents related to schools in Vermont, the Michigan items were next in order, the last published were those relating to schools in Illinois.

Earliest of all was the program of the Junior Exhibition held at Middlebury, Vt., on May 7, 1844, and next in order came the program of the Commencement held at the College on July 23, 1845. From the former it was learned that one J. Adams Allen, Jr., had contributed to the Junior Celebration a speech on "The Speculative," and in the latter it was noted that at his graduation a year later, Allen spoke on the "Philosophy of Civil Society." Since his name appeared on each of the two programs, it seemed logical to presume that it might have been he who had brought together all the pamphlets found in the lot in the bookstore.

If he had collected these items under consideration, the known details of his life would be of great help in assigning cohesion to the material. When regarded in their chronologic sequence, and studied in comparison with the available biographical facts relative to J. Adams Allen, Jr., it was soon apparent that all of the items could have been of some interest to him at one time or another, that there was none which he could not have procured, nor any for which he would have been likely to evidence no regard. Born at Middlebury, Vt., in 1825,

Jonathan Adams Allen, Jr., obtained his Bachelor's degree at Middlebury College in 1845, and his degree in medicine at Castle-ton Medical College in the following year. After spending a short time in the practice of medicine in Kalamazoo, Mich., he was called to Ann Arbor in 1849 to occupy the Chair of Materia Medica and Physiology in the Medical Department of the University, which was then being organized. Shortly after his assumption of the teaching of the two subjects assigned him at the beginning, the onus of the instruction in Therapeutics was added to his scheduled duties, making his chair comparable to the one held by the "illustrious Haller," and which Oliver Wendell Holmes described as a settee of professorships. In 1859 Dr. Allen went to Chicago to occupy the chair of Theory and Practice of Medicine which he held until 1890, when failing health caused him to relinquish active teaching.

With these details at hand, the probable nucleus of the collection of pamphlets may be conceded to have been formed while Allen was still in Vermont. Saving, for sentimental reasons, the programs in which his name appeared as a participant in college exercises, he later added the academic publications as a matter of record of his affiliation with the school at Michigan, and finally put in the documents relating to his work at Rush Medical College. A collection of pamphlets formed in such a manner is often the means of preserving from destruction publications of an ephemeral nature regarded at the time of their publication as of no importance, but which assume relative value in a comparatively short time for the reason that but few examples survive the wholesale destruction which is the lot of most copies. While it is true that no single item in the recently discovered collection brought together by Dr. Allen holds any great bibliographical interest, historical value or intrinsic worth, an example is seldom found now outside the large libraries, and even such a great collection as that of the Surgeon General of the U. S. Army lacks some of the items. Mr. Bishop has been kind enough to determine that there are copies of all of the pamphlets relating to Michigan University in the Library at Ann Arbor.

Of all the items in the collection, those dealing with the Medical School at Ann Arbor are of the most interest, in that they

record, in a way in which no other printed documents can, the early history and growth of the new institution. In this group are catalogs of officers and students in the University for the years 1851 to 1854, a copy of the first catalog listing medical students, a copy of the first rules for the Medical College, the first, second, third and fifth annual announcements of the courses of medical lectures, a copy of the address by Dr. Zina Pitcher to the first class of graduates, and the report of the Committee on Professorship of the Board of Regents, printed in 1845. The perusal of these items is not without interest, and a critical study of them reveals the sincerity of purpose, far-sightedness and loyalty of the early leaders in the institution.

The story of the first Faculty at Michigan has been told by both Professor Hinsdale and Dr. Vaughan, who have contributed so gratifyingly to the recorded history of the University. How Drs. Sager and Douglass, who had been teaching in the University for a number of years, were joined by Gunn, Allen and Denton to form the original faculty is told in the accounts mentioned. Gunn joined the faculty in 1849, and in January, 1850, came Dr. Allen, who served as secretary of the faculty for a number of years.

The pamphlet entitled, "The Report of the Committee on Professorships of the Board of Regents," published in Detroit in 1845, makes no mention of a department of medicine, but does set forth a number of resolutions for the conduct of the affairs of the University. Paragraph 6 of the section dealing with the procedure in conferring degrees states quite plainly that "there shall be no military parade, bands of professional musicians, illuminations or fireworks, balls or parties for feasting by the students, on the occasion of the Commencement." But since no penalty was provided for any infringement of this rule, it must be left to the imagination whether it was obeyed or not. And it is barely possible that the law was adhered to by the students in most instances, because of their lack of money after complying with the provisions of paragraph 7 which directed that there "be a convenient stage erected at the expense of the graduating class, under the direction of the Faculty, for the accommodation of the students of the Senior class, the Faculty, and the Board of Regents, during the Commencement

exercises." Perhaps this item of expense was in the mind of the Committee when they directed, in paragraph 5, that the presiding officer deliver a charge to the class immediately after the delivering of the diplomas.

The modest little tract which first told of

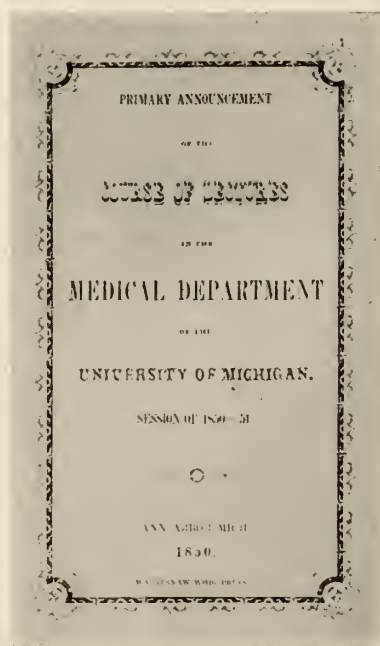


Fig. 1.

the opening of the medical school was entitled, "Primary Announcement of the Course of Lectures in the Medical Department of the University of Michigan, Session of 1850-51." This was a pamphlet of twelve pages, printed in Ann Arbor by the Washtenaw Whig Press, probably in May, 1850, and was bound in a salmon colored wrapper, a reproduction of which is shown in Figure I. On page 3 is given a list of members of the Board of Regents, and on page 5 appear the names of the Faculty. After the name of Dr. Allen there has been placed a pencilled cross, and in the lower margin of the page is the following manuscript notation, "This ann't I wrote myself throughout. J.A.A." While the authorship of academic catalogs and announcements may be of little bibliographical importance, it is of interest to learn that this first description of the medical courses was written in its entirety by Dr. J. Adams Allen, doubtless in his capacity as Secretary of the Faculty.

Under the heading "Of Admissions," the

statement is made that every candidate must show evidence of such literary attainments as recommended by the National Medical Association, viz., "A good English education, the knowledge of Natural Philosophy, the Elementary Mathematical Sciences, and such an acquaintance with the Latin and Greek languages as will enable the student to appreciate the technical language of medicine, and read and write prescriptions."

According to the outline of the system of instruction given in the first announcement, four lectures daily were given throughout the year, except on Saturday, which day was devoted to clinical instruction and the reading of theses. On the last page of the pamphlet is given a list of the various textbooks recommended for study in the subjects of the curriculum. For the most part, the texts chosen were the works of American men, and the standard works of the day.

Probably the most interesting statement in the whole pamphlet occurs at the bottom of the last page, where the matter of expense is given consideration. Here it is learned that in 1850 good board was readily obtained in private families or hotels of the village for from \$1.25 to \$2.00 per week, "or with room, fuel and lights, from \$1.50 to \$2.00."

In 1851, was published the "Rules for the Government of the Medical College, in the University of Michigan." This code, adopted by the Board of Regents of the University at the annual meeting in July, 1850, was printed in Detroit at the printing office of Duncklee, Wales and Co. (Fig. 2). The cover is an apple-green paper wrapper, with an abbreviated title printed on the front cover. The brochure consists of only seven pages printed inside a wave lined border, and deals with such considerations as the duties of the faculty, the terms of admission, the system of instruction and the awarding of degrees. From this little work it is learned that the textbooks used in the Medical School were selected by the members of the faculty, subject to revision by the Board of Regents, and that it was customary to allow clergymen, members of the legal profession, and graduates of other respectable medical institutions to attend the lectures in the school as honorary members of the medical department.

In the second annual announcement of lectures, printed in Detroit, in 1851, by William Harsha, at the Franklin Job Office,

is given a list of the names of the first six graduates of the medical department. That the new school was popular is attested by the fact that there were 91 undergraduates in attendance during the first session, as noted in the last paragraph on page 8 of

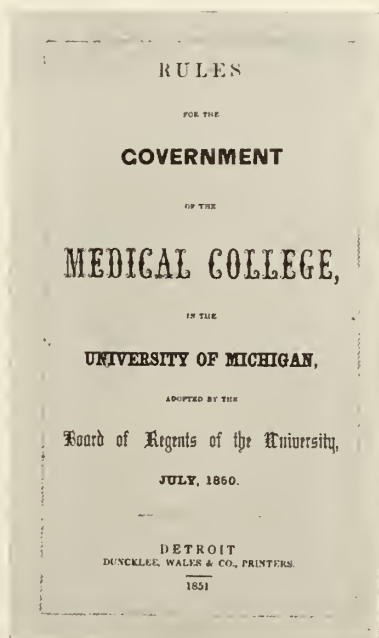


Fig. 2.

this booklet. The title page makes no statement that the announcement is the second one published, but the third and fifth annual announcements are designated as such on their title pages.

The large size of the first medical class had a profound influence on one of the customs of the Campus. Dr. Moses Gunn, first Professor Anatomy and Surgery, has described this influence in the following words:

"The first medical class numbered ninety-two students, a number, I think, quite unprecedented, at that time, for the first class, in the history of medical colleges. The size of this class exerted an amusing influence, for one year at least, on the practice of hazing. A mild form of hazing had been in vogue which consisted of the initiation of the freshmen by the sophomores into the 'Bumptonian Society.' The department of Arts and Science had opened early in September. The sophomore class had lost in numbers while the freshmen were unusually numerous. Under such circumstances, the Sophs. hesitated in opening the campaign.

Finally, deeming 'discretion the better part of valor,' they effected a compromise, whereby the Fresh. were to enjoy immunity on condition that they would join the Sophs. in the initiation of the expected Medics. Exultingly the confederated Lits. awaited the advent of the poor Medics. But when on their arrival it was discovered that they outnumbered all four classes on the other side of the campus, and that among their number were many stalwart and matured men, more remarkable for physical development than for refinement of face and manners, consternation seized the confederates, and there ensued a status, described in later times as 'all quiet on the Potomac.' All was quiet on the campus. The 'Bump-tonian Society' ceased to exist and was heard of no more."

Last of this group of documents is the "Address to the First Graduates of the Medical Department" by Dr. Zina Pitcher, a Regent of the University, and President of the Michigan State Medical Society. The title page shows that it was printed by Harsha in Detroit, in 1851. A peach colored paper wrapper enclosed the oration of 16 pages, and bears an ornamental border surrounding the title of the work (Fig. 3).

A letter from the Committee of the graduating class, requesting a manuscript copy of Dr. Pitcher's address for the purpose of publication, bears the date April 16, 1851. This address was delivered to the six men who were the first to receive the degree of M.D. from Michigan's new Medical School, and, were it to be repeated for the benefit of the class of 1931, but few changes in the original would be required to bring it out of a parachronistic state. The graduation orator begged his hearers to avoid fads in the practice of medicine, and stated his belief that homeopathy would be forgotten during the generation of his young hearers. His advice that the graduates acquaint themselves with the history of their chosen profession, and that they cultivate respect for their teachers and a feeling of veneration

for their Alma Mater, together with an admonition that their hearts be embalmed in the spirit of benevolence, without which their vocation would degenerate into a trade, imply a concept of attitude which

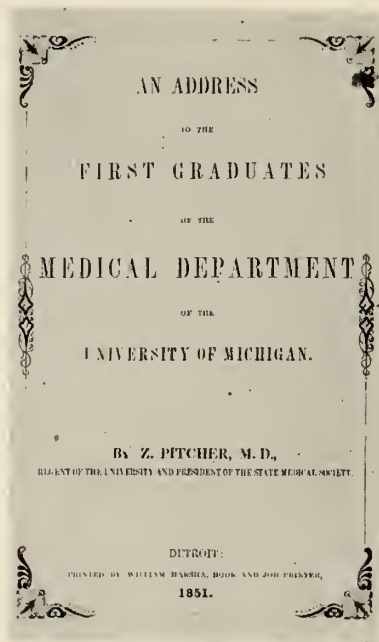


Fig. 3.

graduates of this year would do well to adopt.

In comparison with the great department of medicine which today exists in Ann Arbor, the buildings and endowments of the school in 1850 seem piteously small, but the faith of the founders has been justified in the present school. To turn to such records as the early printed documents which have here been described, must inevitably increase admiration and respect for those farsighted pioneers who put forth their best efforts in all sincerity for the success of the University, and should inspire the gratitude of those who now enjoy the fruits of the labors of such men as Moses Gunn, the Regents,

310 MICHIGAN BLVD. SOUTH

THE USE OF SYNEPHRIN EMULSION*

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For years the medical profession has been using epinephrine to shrink the nasal mucosa. For a shorter time ephedrine has been used for the same purpose to allow drainage of accessory sinuses by shrinking the nasal mucosa.

These drugs have not been ideal, since their use is accompanied frequently by irritation, burning, attacks of sneezing, and followed by a compensatory hyperemia in the course of an hour or so.

We have all felt the need of a drug with no toxic or untoward effect to blanch or shrink down the mucous membrane of the nose. I believe we have this in synephrin emulsion.

My experience with it began about one year ago, during which time I have used it in a great many cases of ordinary colds, influenza and upper respiratory infections, with excellent results.

I have not seen any irritation from its use. This is one of the main drawbacks to the use of the older drugs—epinephrine and ephedrine.

CHEMISTRY AND PHARMACOLOGY

As this drug has not come into general use, perhaps a few words regarding the chemistry and pharmacology of synephrin would be wisely introduced at this point.

Synephrin is p-methylaminoethanolphenol and in chemical structure resembles epinephrine and ephedrine, but is not identical with either. The essential difference between epinephrine and synephrin is that epinephrine has two hydroxyl groups attached directly to the benzene ring, while synephrin has but one. Ephedrine has none, but has an additional methyl group in the chain. Tainter¹ boiled solutions of synephrin, exposed it to light and air for months without diminution of potency, which indicated that, unlike epinephrine, synephrin is quite stable and can be sterilized by boiling if desired. Tainter states also that the action of synephrin is a vasoconstriction, which is due to direct stimulation of smooth muscle. However, Kuschinsky² states that "we are not justified in concluding that the drug acts directly on muscle" from his experiments. Kottlors and Faust³ also disagree with Tainter and claim

that the points of specificity are the endings of the sympathetics, which are different quantitatively and, therefore, a difference in action may result. According to Tainter the constriction caused by synephrin is more prolonged than that caused by epinephrine as judged by the time of recovery. He also states that fifty times the therapeutic dose causes no depression or other untoward effects. For this reason Fischer⁴ states that synephrin[‡] should be tolerated well in arteriosclerosis, cardiac insufficiency, hysteria and epilepsy.

USES

Synephrin is used in the form of a bland vegetable oil emulsion of synephrin tartrate as a topical application to the nasal mucosa. In about five minutes after the application of the emulsion, either with a medicine dropper or by swabs inserted between the turbinates, the mucosa on examination appears to be blanched and subjectively the patients are able to breathe better through their nose. In my mind, the emulsion offers considerable advantage over a watery solution since its surface tension is lower and it is able to spread over a larger surface. It also has the advantage over a mineral oil solution since the emulsion is thoroughly miscible with watery nasal discharge.

From these properties and uses it can be seen that the use of synephrin in the treatment of ordinary colds is a logical step and it is in this direction that I have used it myself. I feel that it is a wise precaution and have used it in all cases of measles and scarlet fever which have come under my care, with the idea of preventing otitis media and sinus infections. While it is hard to form any conclusion as to its value as a preventive, I feel that I was giving the patient a

*Synephrin emulsion is an emulsion of synephrine tartrate in a bland vegetable oil base, marketed by Frederick Stearns & Company, Detroit, Michigan.

†Dr. Carmichael was graduated from the Detroit College of Medicine and Surgery in 1912. He is engaged in general practice in Detroit.

‡Synephrin is known in Germany as sympatol.

much better chance to avoid these complications. In acute rhinosinusitis, the patient gets almost immediate relief from the application of the emulsion applied topically to the nasal mucosa. It is not necessary for the patient to use an atomizer, for the emulsion is best used with a medicine dropper. The continuous film which results from a drop of emulsion introduced into the nose will not be formed if the emulsion is used in an atomizer.

The use of synephrin emulsion is not attended, to my knowledge, by a compensatory hyperemia such as usually follows the application of epinephrine or ephedrine. Continued use of epinephrine has been experimentally shown by N. Fox⁵ to cause atrophy of the nasal mucosa with intraepithelial abscesses. For this reason and since the actual effectiveness of the drug lasts much longer, it is to be preferred.

The other advantages, such as lack of

burning or irritation, also outweigh those of the older drugs.

SUMMARY

1. Epinephrine and ephedrine are unsatisfactory nasal constricting therapeutic agents on account of the irritation, burning and compensatory hyperemia accompanying or following their use.
2. Synephrin emulsion mixes well with watery nasal discharge and spreads in a continuous film over the nasal mucosa.
3. Synephrin emulsion undiluted causes no irritation or burning.
4. Its action is slower than epinephrine, but it lasts much longer.

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SCHIZOPHRENIA*

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Gentlemen: I am presenting these patients this morning and the first question that presents itself when you are dealing with these cases is, are they psychotic? We do not use the word insanity, we use the word psychosis instead. The next question is, whether they are psychotic enough that they cannot get along outside and need to be institutionalized in a hospital away from general life and society. (Psychosis can be said to be a flight from reality and from the adult form of existence back to childhood, to a happier time in which phantasy prevails unhampered by actuality.)

The third question is: What form of psychosis have they? This means a diagnosis of the form of mental disease from which the patient is suffering. A diagnosis in all mental cases cannot be made as easily as in diseases of the body and the reason for it is, that we have to study the patient and his characteristics for some time before we can definitely label him. Another reason for it is that in any other form of somatic disease we base our diagnosis not on symptoms only, but on the correlation of the symptoms with the pathological findings. No physician would diagnose, for instance, typhoid fever or pneumonia, because the patient happens to have a chill or a fever. In organic diseases we have more definite path-

ological findings that have been verified time and again by post mortems to such an extent that we can definitely associate the symptoms during life with the pathology on post mortem table. Now, that is not easily done in mental diseases and it is not because post mortems are not available, but because in a good many cases at the post mortem table we find very little gross pathology and are very often disappointed in the microscopical findings. These patients are diagnosed here as schizophrenia (dementia præcox). To physicians, nurses and attendants in psychiatric hospitals this class of patient still presents difficulties. At the present time in different hospitals throughout the United States one-fifth of all the beds are filled with patients who have dementia præcox. Be-

*Clinical lecture with presentations of cases delivered before the Visiting Staff at Eloise Hospital, Eloise, Michigan, May 27, 1931.

sides those, we have possibly as large a number outside of institutions who *do* in some way adjust themselves to their surroundings. These are usually cases of incipient schizophrenia (*dementia præcox*) which may later on develop into full fledged psychosis that will have to be confined. The total economic loss in the United States alone in schizophrenia (*dementia præcox*) cases is estimated as approximately one million dollars a day. Bleuler derives schizophrenia from the Greek, transferring it into English as a "dream state." As a matter of fact the "dream state," being a phase of consciousness, is not susceptible to definition. As we see them in mental hospitals the patient is usually totally oblivious to his surroundings, appearing to be a state of dreaming. The question is, what is schizophrenia (*dementia præcox*)? If one looks up the literature, there are many definitions. The best definition is that it is a constitutional mental disorder, usually occurring in early adult life, running a chronic course and resulting in a special type of mental deterioration characterized by indifference and incoherence and relatively slight involvement of memory. Then it is a disorder that takes onset in early prime of life and persists for many years.

Schizophrenia (*dementia præcox*) incipient starts very early in childhood, but it is not very often recognized because the negativistic behavior of a child is passed off as being naughty. Contrary to prevailing opinion, it is not the children of poor parents, who do not take the child to a psychiatric clinic or to a mental hygiene clinic, that are the ones who will develop a psychosis. We find it usually in such patients who may be the only child in the family, or children, usually, of well-to-do parents, children that are pampered, who are given everything they want, or who are taken care of by governesses and nurses. Children who attend private schools and in general receive too much individual attention, either by mother, nurses or governesses, are apt to be victims. They are children who are not allowed to mix very much with others because they "will acquire bad habits or diseases" and we notice in those youngsters that when they are thrown in contact with what we commonly call "street children," they act superior and in a general way they do not seem to know how to play and mix with them. Now you can see when such a child

grows up it cannot stand the "give and take blows" from its associates and playmates, and it gradually develops into a personality that is more or less shut-in. Otherwise, he meets a situation with which he is unable to cope and he is often treated indifferently by his playmates on that account. This develops him into a more or less peculiar individual, with very few or no friends to which he could go and be in a more or less intimate sphere. Commonly speaking, he becomes lonesome and alone (and to me the song of "Me and My Shadow" by Al Jolson and others has originated from just such a personality). Later on, to this young individual finally comes adolescence, adult circumstances commence to develop with the demands of nature upon adolescence, such as natural urges that are a result of his adult development; such an individual becomes panicky. He does not understand the urges of sex and the demands that nature makes upon him. He may develop the habit of masturbation and finally, that preying on his mind, he may become more shut-in, and feels that he is doing something very wrong and is a great sinner. He is handicapped against the youngster who has taken other youngsters in confidence and has played games, and even at the risk of developing certain sexual information that is not such that society deems the proper information, he is better off than the boy we have just described. If we follow such a young man farther up in life, his incipient schizophrenia may further develop to such an extent that he may become highly suspicious of his fellow man, his friends, and even of his family, and consider himself a failure. He loses self-respect and has a sense of isolation. The loss of self-respect is due to the failure of the individual to come within satisfactory reach of his own personal standards and surroundings. Schizophrenia (*dementia præcox*) then becomes a defensive reaction to an individual who is very sensitive and has a feeling of personal failure; it is therefore a personal dream state. The patient may think that there is something in life that he is missing and something in general that he does not understand nor know about, or to which he cannot adapt himself. Being shut-in himself, he develops what we may call definite hallucinations. (Hallucinations, it can be said, is a symptom arising from disorder of perception consisting in imaginary perceptions—perception without any

object). They may refer to his food, to his general life, or they may refer to his sex, to his friends and parents. In fact, perception through all of his senses may be interpreted differently. Then such a man becomes a definite schizophrenic that cannot get along outside, and his hallucinations finally develop into definite delusions so that he may have to be institutionalized and in a way taken out of society. (Delusion is an idea arising in disordered judgment which is without foundation in evidence or in conflict with evidence and which is recognized as obviously false by persons of average or normal mind.) The patient may refuse to eat. He may consider himself a failure in general and refuse to work. He may become so that he refuses to dress himself, to take care of his body and his clothes, show a great lack of alertness, preoccupy himself with day dreams and finally definite withdrawal from contact with persons and things about him, so that indifference constitutes an early and prominent symptom of this disease. He takes no interest in anything, expresses no desire and makes no complaints. Being unable to meet his own standards, it must follow that his standards are wrong or that he was unable to bring enough energy or wisdom to deal satisfactorily with the situation in which he finds himself.

Another difficulty very often arises in diagnosing (and again because we base it upon symptoms) because the patient becomes depressed, and if a diagnosis is attempted during a period of depression without watching the patient long enough and having him under close observation for some time a snap conclusion of manic depressive insanity may be made. We may observe our patient sitting in a catatonic position, a definite syndrome, and we may definitely diagnose his condition as catatonia, or we may interpret in his hallucinations and delusions paranoid trends and diagnose his condition as paranoia. Some of these diagnoses, however, are not entirely wrong, because on a schizophrenic structure you can have some other forms of insanity; for instance, you may have a catatonic form of schizophrenia. You may have a paranoia with schizophrenic basis. Almost any form of insanity can be superimposed on a schizophrenic makeup.

Symptoms that are common to all forms of schizophrenia are:

(1) The psychic symptoms. We may have orientation and memory preserved or little affected. Attention, association of ideas and emotions are involved. Very often such patients will give rational correct replies as to surroundings and important events of the day. Memory may be only slightly defective in the majority of cases, but it is important to know that such things or knowledge that occur during youth and childhood are well preserved. The patients can enumerate events and things that occur at time of their commitment, but as they progress in deterioration the memory is very much impaired and impressions become fainter until they are entirely lost.

(2) Somatic symptoms such as glandular dystrophy plus such physical symptoms as will finally develop as a result of his mental disease. The patient, by refusing to eat, may become greatly emaciated. By excessive masturbation he may lose a great deal of weight. In fact, he may have any physical symptoms presenting themselves as a result of his mental condition.

In regard to treatment, we feel that incipient cases are the most hopeful. In those cases a good deal can be accomplished by re-education of the patient, rectifying his standards, if possible, and if that cannot be done, the patient must be adapted to his own standards, increase his available energy and get him to make more use of his own energy and in that way enrich his self-respect. Anything that will directly or indirectly help in the suggestion to increase the patient's self-esteem is beneficial; for instance, we might teach the patient to maintain cleanliness in his personal hygiene. If one can increase the self-respect in such patients, the psychosis improves. It will always be necessary in gaining the explicit confidence of the patient to remember that he is very sensitive and that the psychosis he has is only a protective reaction to him, the same as in hysteria, and he will make the most of his protective reaction as long as he needs it. Consequently it is our duty to increase his self-esteem in order to improve his psychosis. This problem presents itself very strongly in institutions. Not only the attending physician but everybody who comes in contact with the patient, such as the nurses and attendants, must understand his mentality and act accordingly so that the patient will not feel that people and those surrounding him are in any way better adapted than he. Such

experiments have been going on for some time where groups of dementia præcox patients have mingled with attendants in order to create an atmosphere of equality; after long study, the patients and attendants and physicians become so that they understand one another.

Other forms of treatment that have been advocated in these cases have only helped so far as restoring the physical condition of the patient. The glandular treatment has done a great deal where there was an endocrine disturbance. Psychotherapy, tonic treatment, and diet have only helped so far as to improve the physical condition. The real effective treatment consists in raising the self-esteem of the patient, in making him believe in himself. Psychoanalysis has been of great benefit in releasing the emotions of the patient.

From the group of cases presented I will describe only the following two cases because they illustrate very strikingly some of the features brought out in this paper.

Case 1.—A. D. is a young adolescent about 20 years of age, underdeveloped, of hypoplastic asthenic type, showing residuals of rickets and he is markedly stigmatic. At the time of the onset of his illness he was a junior in the engineering department of the University of Detroit. The parents were Jewish, born in Roumania; the family history is negative on the paternal side. On the maternal side the father died following a paralytic stroke, the mother died of Bright's disease. One sister had gangrene poisoning for two years prior to her death at 63. The immediate family history is negative. The patient's family are economically fairly well adjusted. The patient was born in Detroit, 1909. Developmental history is negative. Birth was normal, the patient was breast fed until two years of age. In infancy he was sickly, had fever and developed rickets, and in the following two years had in rapid succession whooping cough and pneumonia. Because of these illnesses he was the object of solicitous care of an over-indulgent mother. Walking was delayed, the patient remained emotionally dependent upon her, with marked persistence of infantile fears and infantile mannerisms and interests up to twelve.

Intellectually, the patient made rapid progress; he attended public school, completing the four years of high school and entering college at the age of 18. He was socially maladjusted and unable to compete in athletics or social activities. Unconsciously, he selected younger companions so that his immaturity would be less noticeable. He developed a cynical and aloof attitude toward girls. He plunged into academic work, attempting to compensate for his weakened body.

The family first noticed that he became decidedly arrogant, headstrong and dominating. He became gradually suspicious of his mother; suddenly he began to abhor the solicitous attention and interest of his family, but more particularly his mother. The family regarded this attitude as one of the accompaniments of adolescence and paid little attention to it.

The onset of his illness was gradual, but seemed to center about a quarrel with a girl in an orchestra. The patient had especially enjoyed his associations

in the orchestra. He could not adjust, but left the group, claiming that his college work required more time. Two weeks later he became very nervous, had marked feelings of inferiority, feeling that he might be forced to drop his academic work.

He had an acute gastro-intestinal upset, and in connection with it he imagined that he was being poisoned by his mother. These ideas persisted. At first they were amenable to suggestion; later he became agitated, calling out his accusations in a theater where he attended the moving pictures with his family. He was extremely destructive, tore up his books and papers and ran away from home.

He returned some time later, complaining of acute pain. The family were alarmed and had him taken to Ford Hospital on February 3, 1930. He remained until February 20, 1930, where he showed the beginning of a delusional system, directed toward his mother. He believed that he was being held in the hospital for experimental purposes at the insistence of his mother, and that they were going to operate on his genitals. He was released, and that day stole \$20 and made his way to Chicago. He was deluded at that time, feeling that he had been followed from Detroit, and was returned with difficulty. He was placed in Receiving Hospital and later released; he attempted suicide by turning on the gas. He was returned to Receiving Hospital, from there transferred to Ann Arbor by order of the Probate Court for observation.

His period of residence in the hospital was characterized by a superficial and contemptuous attitude of resentment toward confinement. From the beginning it was evident that a realization of his own physical deficiencies dominated his actions, and that he was exceedingly egocentric in his behavior in the wards. When accosted, his speech betrayed the same egotistical trend—all in an effort to win recognition for his superior abilities. Only occasionally was he freely accessible, and then his suspiciousness and hostile attitude precluded any attempt at interpretation of his most glaring accusation.

It became increasingly evident as time went on that attempts at rationalization only fostered the development of his delusional system. Even after withdrawal from controversy his system flourished to a gigantic extent, giving expression to the coarsest and most obscene accusations against everyone in the vicinity.

Occasionally the patient had periods of insight in which he rightly placed his entire problems within his own sphere and bitterly and apologetically proclaimed his own physical deficiencies were sufficient to warrant his present trouble.

For the most part, however, he was prone to assume the pathological viewpoint that circumstances beyond his control had stunted his growth. He spoke with an air of finality and vindictiveness that his mother, and she alone, was responsible for his unhappiness.

In his history there was the typical falsification of retrospective memories, such as doubt as to the authenticity of his parentage, neglect of his care during infancy and early childhood, acute religious conflict, a desire to be a Gentile and to associate with them rather than with Jewish people.

He accused his mother of influencing his social life and of spying on his intellectual interests. His philosophy of living may be summarized: "No one can have a perfect body in this world. I can compensate for the body I have because I had no control over things that happened in the past. In a case like mine, where the body has peculiar characteristics not highly developed, the mind in accordance is very active." This philosophy did not suffice, however, as the patient desired social activity; his attempted compensatory system broke down under the strain of attempting to adjust. From a psychiatric

standpoint it seems evident that his problem was an outgrowth of a parental-family situation. He appreciated keenly the deficiencies of his physical body, but hoped to compensate himself by his intellectual achievements. It is felt that he must have realized his inadequacy from a social standpoint and, with the oncoming sexual drive, his ego was unable to compete with the usual urges.

In order to protect himself, he developed a delusional system which had a two-fold value: first, to relieve him of the necessity of attempting sexual adjustment, and, secondly, to give him an opportunity to vent his rage against his mother for her abnormal interest in him, blaming on her the malformed body and physical consequences thereof.

Neurological and laboratory findings were negative. The patient was transferred to Eloise Hospital, August 28, 1930, for further hospitalization and treatment. His improvement at Eloise Hospital is such that we feel in a short time he may possibly be released on parole and under further psychiatric observation may adapt himself in the future if his home surroundings could be changed so that his parents and family will understand better how to handle him.

Case 2.—G. P. is an undernourished boy of 14, shut-in and inaccessible, admitted to Eloise from Ann Arbor Hospital November 4, 1929. This patient has a very poor hereditary background. The paternal grandfather was heavily alcoholic, the maternal grandmother died of paralysis. Of the collateral line eight children died in infancy, cause not ascertained. One boy died of diphtheria. On the maternal side the grandfather is living at the age of 86, but is nervous and irritable, with an uncontrollable temper. He is living alone on a farm. The maternal grandmother died of influenza at 85. There were twelve children by this marriage. A maternal uncle was mentally ill a year ago and is presumed to have recovered. One aunt died thirteen years ago, having been hospitalized for some mental disorder. This woman had four children, one of whom was born prematurely and was deformed. One maternal aunt died of spinal meningitis at 15, and another of tuberculosis at 16. Two uncles are described as "worrisome and fretful." One aunt died at 17 months of "inflammation of the lungs."

The patient's mother was born in Michigan, the seventh of the family of twelve children. She completed the eighth grade with difficulty. She is nervous and had a breakdown six years ago lasting one year. She "thought someone was after her," was afraid to turn around and "had noises in her head." She is still hysterical and frequently laughs without being able to control herself. During the interview she reiterates, "I'm so nervous I can hardly tell you anything. I am just like the boy." She wanders in talking, has difficulty remembering things. In personality make-up she is timid, easily embarrassed, frequently confused and afraid of crowds.

The father, 42 years of age, was born in Hungary and came to the United States at 17. He is nervous, excitable and irritable. He denies alcoholism and smokes but moderately. He refused to give any information about the patient, claiming that he gave all that information many times at previous hospitals. There is a history of Neisserian infection prior to marriage. The patient is the second of the family of four children; the oldest girl died at the age of 3 of diphtheria. The two younger children are retarded in school work and are failing to pass.

The patient, G. P., was born in Detroit. The developmental history as given was negative. He had very eccentric care, was not permitted to mingle with other children nor to play out of doors for fear he might learn unclean habits. He was backward at school; he entered at 5; he has had two failures and has been transferred to a fresh-air room. The patient appears to have been a sickly child, having had the following children's diseases: measles, mumps, whooping cough, chickenpox, influenza, diphtheria and scarlet fever. His present behavior has been developing over a year. He has often had spells during which he would laugh and cry. While in Herman Kiefer Hospital he became excited and exposed himself to other children; was silly and tried to attract attention. He made obscene remarks and repeated everything that was said to him. On returning home he made faces at the neighbors, tried to run away, and was quite voluble. He was placed in Grace Hospital and was over-active, untidy, over-talkative and obscene.

Physical, neurological and laboratory findings were essentially negative. Psychiatrically, his conversation was marked by inadequacy and blocking. A mental test showed him to have an intelligence quotient of 52, but this was not a reliable test because of his indifference and blocking.

In addition to being negativistic, he betrays mannerisms, his speech is explosive and springy and his head is kept turned aside. His movements are jerky. He is oriented and his memory is unimpaired. He gives no evidence of autistic thinking. His attitude is characterized chiefly by indifference. There is a history of masturbation and the patient is a nail biter. He has been taught by his mother that girls will make him crazy. He has always been shy and inclined to avoid people, and is emotionally unstable.

To summarize, we find this 14 year old boy carrying a constitutional load, and reared by an eccentric and deviated mother. He developed influenza during the past winter, followed by scarlet fever. Subsequent to these infections an exacerbation of his normal schizoid personality occurred, marked first by excitement and followed by indifference, mannerisms and blocking. This patient is diagnosed as schizophrenic catatonic excitement followed by apathetic manneristic reactions.

We feel that this patient needs further observation.

1229 DAVID WHITNEY BUILDING

FAMOUS MEN IN MEDICAL HISTORY

JOHN COLLINS WARREN*

ROYAL A. MEYERS

Many years before George Washington and Benjamin Franklin were recognized as the two greatest land speculators this country has ever known, and at a time when cocked hats were in vogue, and gentlemen of a certain age wore wigs which they sent to the barber's once a week to be freshly dressed, there lived in Boston one who had stood at the head of surgery in New England for more than half a century—John Warren. On the eve of the battle of Bunker Hill, this leading practitioner and tutor was made a Major-General and at the close of the war in '77, about a month after Gentleman Johnny Burgoyne's surrender, Warren himself surrendered to the charms of Abigail Collins, a daughter of the Governor of Rhode Island. Their eldest son, John Collins Warren, was born August 1, 1778.

At about the time when young John was undoubtedly beginning his struggles with the alphabet, the practice of medicine was far from lucrative because of the fluctuating state of the old continental money, as well as the absurdly low fees received for medical attention. Wealthy patients might pay as high as fifty cents a visit, providing one included in that the necessary prescribed medicine. To remedy such a state of affairs the Boston physicians called a meeting of all active practitioners, and as a result the older Warren submitted a report to the Corporation of Harvard College, embodying a plan for the foundation of a medical school. We are not surprised that this plan should be adopted, thus founding Harvard Medical College on the 19th of September, 1782.

The Revolution had wrought a decided change. Previously the welfare and the establishment of the church had come first; then, too, there was a difficulty in procuring funds as well as scanty need for higher medical education. Lastly, this period resulted in the development of a new type of physician—the American physician.

Subsequently the Corporation voted to appoint one professor to manage all branches of the new school—John Warren. Nor are we surprised at this, as he had been the one to deliver the first course of anatomical lectures in New England at as early a period as 1780. So while the older Warren was struggling for the success of the new medical school, the younger Warren, having concluded his studies at a reading and writing school, was sent to the public Latin school, which he attended for seven years. Here John soon attained the head of his class, which he retained for the greater part of the time.

When John was fifteen years old, he entered Harvard College. While there he never acquired the fixed habits of application which we later note as one of his most outstanding traits of character. He did, however, devote much of his time to reading, and acquired such a knowledge of the languages as would be valuable to him later.

Young Warren graduated in 1797, but owing to a more or less frail constitution he did not at once begin the study of his profession. His father had decided that the practice of medicine was too strenuous and desired that his son engage in the more immediately lucrative pursuit of merchant. Nevertheless, it was soon discovered that very little business was being transacted in Boston as the foreign trade kept only six merchants really busy, condemning the others to many idle hours. Consequently, a year after he had left college, John began the study of medicine under his father, choosing this profession after mature deliberation as he considered it the most useful.

Due to the lack of hospitals and medical schools, it was becoming customary for medical students, who served as apprentices to the physicians, to complete those studies begun elsewhere at such places as Padua, Leyden, Montpelier, Oxford, etc. Thus it is by no means surprising that, after a year's drudgery and monotony at compounding medicines, young Warren should visit Eu-

*Read before the Victor Vaughan Society, University of Michigan Medical School, February 5, 1931.

rope. He embarked for London in 1799, at a time when France and England were struggling together in fierce combat.

In the hospitals of England he found two types of students, "dressers" and "walkers." The former had the advantage of practicing on all simple surgical cases and dressing all the wounds themselves; the others were merely spectators. Young John entered Guy's hospital in London as dresser to William Cooper, who was at that time the senior surgeon. This privilege cost Warren approximately two hundred and fifty dollars, but he considered this a meager amount, inasmuch as Cooper was quite old, and made only occasional visits to the hospital, allowing his dresser many opportunities of practicing surgery on his own account. Toward the end of the year, the elder Cooper retired, leaving his nephew, who later became knighted—Sir Astley Cooper—as senior surgeon. Consequently Warren was exposed to slight variations in medical opinion, although the younger Cooper was entirely opposed to Sir William's axiom: "Let nature alone; she will open that abscess infinitely better than you can."

From the very beginning Warren resolutely determined to devote himself to his studies heart and soul, making it an absolute rule never to waste time in any useless amusement, so that he early acquired a fondness for his profession. During his sojourn in London, he lived on the third floor of a cork-cutter's house, and, like other medical students of the time, kept entirely to himself. He followed a definite daily schedule, doing his dressings in the morning, attending the lectures of Sir William Cooper at noon, dissecting in the afternoon, and visiting Sir Astley Cooper's lectures on surgery in the evening. At various times he was also able to obtain additional lectures on midwifery and physiology. Through one of his letters to his father we learn that the dissections were carried on in great style, there being twelve to fifteen bodies in a room and different students performed various dissections at the same time. Apparently the profession had very little difficulty in procuring bodies, for there had arisen a certain group called "Resurrection men" who supplied them abundantly.

Following a year's stay at Guy's hospital, Warren stayed two years at Edinburgh, Holland, Belgium, and Paris. After a year at Edinburgh, he received his medical de-

gree, and while there he noted especially that here was the place for a student, as everything was calculated for study, although medical opinion was based more on theory. In London, he states, "The people here look for facts, they trust no theory, but experience is the only creed." It is also of interest to learn that no specified term of study for the medical degree was required; the student usually attended two or more courses and then notified one of the professors that he proposed to graduate, whereupon he was privately examined and a subject for dissertation was assigned to him. If he passed he received his degree.

About the same time that England and France were parleying over peace-treaty terms, Warren was living in Paris with Napoleon's distinguished surgeon, Duboise, and studying under Corvisart, Cuvier and Duvuytren, etc. He was determined to pursue anatomy and chemistry until he had a thorough knowledge of them.

Upon returning home in the fall of 1802, young Dr. Warren learned that his father had suffered an attack of paralysis, and, although he had practically recovered from it, he required considerable aid in carrying on his professional duties. By the following summer, Dr. Warren found it necessary to relieve his father of his entire practice, which was then the largest in Boston.

A year later, he undertook the dissection for the anatomy lectures at Cambridge, and it is probable that the time spent at the work might have interfered greatly with his approaching marriage to Miss Susan Powell Mason, the daughter of the Honorable Jonathan Mason of Boston. It has been said that, shortly after his marriage, Warren frequently made as many as fifty daily visits among his patients and still found time to seek out other objects of interest and employment.

Ample proof is offered for the latter statement, in view of the fact that the Massachusetts Medical Society, which had been founded in 1781, early elected Dr. Warren to its membership. One of his first papers presented to the society discussed the first case of ligation of the femoral artery, following an accident to a young lad. One also finds that during the same year he became a member of the Monthly Anthology club, and, in fact, he was for a while the co-editor of the Anthology, until his professional duties prevented his taking such an active

part. Then, too, with Dr. Jackson's assistance, he founded a medical society for the mutual improvement and benefit of those holding membership. This society met once a week, at which time medical papers were read and discussed. After existing until the death of all but its founders (nearly six years) it became, through the exertions of the latter, the Boston Medical Library, to be absorbed again later by the Athenæum.

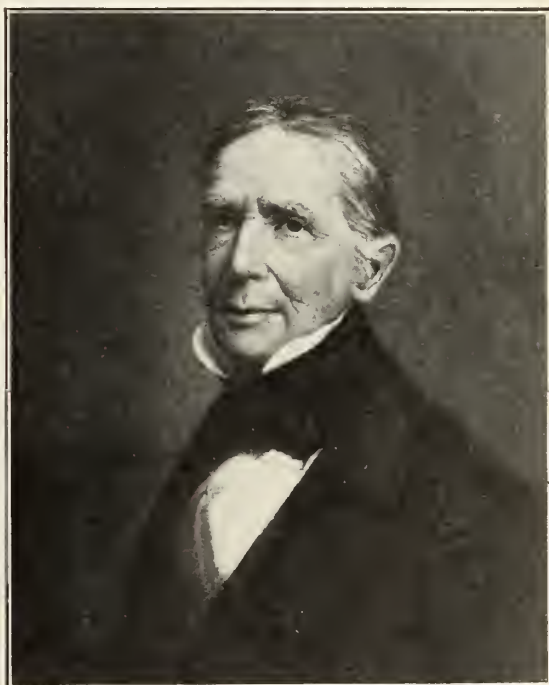
Dr. Warren must have taken an active interest in his state medical society as his name figures prominently in the various committees. In the latter capacity his first efforts were directed toward the composition of a pharmacopeia for the society's use. It embodied the first systematic nomenclature of medicinal substances and a simplification of medical prescriptions. After being presented to the councillors in the summer of 1807, it was ordered printed. It would be unfair to Warren's lifelong friend and colleague, Dr. Jackson, to omit the fact that he, too, was instrumental in the success of the pharmacopeia.

Previously, in 1805, Dr. Warren engaged rooms over an apothecary store and gave public demonstrations in anatomy, for the established physicians of Boston. These rooms soon became the rendezvous for numerous medical men, and, when the medical school was transferred to Boston in 1810, it quite naturally established quarters here pending the erection of a building of its own.

The following year, Warren was chosen adjunct-professor with his father in anatomy and surgery. This position was held until the death of Dr. Warren, senior, in 1815, at which time he assumed the full professorship. During the same year, he contributed valuable assistance toward the formation of the Boston Medical Association, which to this day is characterized by the harmony and union it has promoted among its members.

As early as 1721, the practice of vaccination had been introduced into this country, but there had been so much mismanagement that it was found necessary to correct the latter by some authority. Consequently, in 1808, a committee of the Massachusetts Medical Association was appointed, of which Dr. Warren was a member. The purpose of the committee was to "inquire into the present state of the evidence respecting the prophylactic power of the cow-pock, and

to report such measures as they may find expedient for establishing the practice on a safe foundation." After due investigation it was concluded that "those who undergo the cowpox are as perfectly protected as those who have had the smallpox; and that it is



JOHN COLLINS WARREN

better to revaccinate in order to insure the certainty of the first vaccination."

At the time when Napoleon was demanding of the senate an annulment of his marriage with Josephine in order that he might effect a more advantageous alliance with Marie Louise of Austria, application was made to the Corporation of Harvard University, who in turn appealed to the legislature, for the transfer of the medical school from Cambridge to Boston. This venture was successful only after Jackson and Warren had appeared before the legislature with personal and separate appeals on its behalf. The elder Dr. Warren had also taken an ardent interest in this project, but he did not live to see its completion in 1815.

With the design to further aid the medical school which he had so carefully nurtured, Dr. Warren now proposed the establishment of a medical journal to open a vehicle for medical improvement, and to serve as a repository for such observations as might be made. Subsequently the first num-

ber of the New England Journal of Medicine and Surgery made its appearance in January, 1812. It cannot be doubted that this journal was ably supported and maintained a high rank. Despite this, however, it was not a very profitable concern, and as the editors became more and more engrossed in their medical activities, they had less time to devote to its management. Finally, sixteen years later, it merged into the Boston Medical and Surgical Journal. At this time, Dr. Warren assumed the editorship, and much of the success of that valuable paper was due to his labor in its behalf. For example, those hospital reports in surgery not actually written by the editor were carefully examined and corrected by him; as were also the various extracts from foreign journals which had been selected for publication.

One of the first articles appearing under his name shows that he was not entirely lacking a subtle nature. In it he discusses several cases of neuralgia and states that neuralgia is as satisfactory a term as dyspepsia, for to tell a patient that he has indigestion would never satisfy him; and likewise to say that a disease is upon the nerves implies that the person is nervous, which, as Dr. Warren suggests, would never do. Other topics of medical interest, such as Asiatic cholera, smallpox, fractures, hernia and many others too numerous to mention, were essayed by him. A number of years later a volume entitled "Surgical Observations on Tumors," the first and most extensive work of its kind up to this time, added prestige both to the author and the school for which he labored. The latter point is well borne out when the author attended an operation performed by Mr. Ferguson of St. Mary's Hospital, London, in 1851. Before operating, Mr. Ferguson said, "This tumor is stated by Dr. Warren of Boston, who is here present, and who is the best living authority for what relates to tumors, to have a resemblance to a tumor which was the subject of the first surgical operation under ether which was performed by him."

The medical school being fairly well established, naturally the next object was the obtainment for the students of clinical instruction. The schools at Philadelphia and New York were already offering clinical advantages far in excess of those in Boston, and, as there was no hospital in Boston, the Almshouse and Dispensary being the only places where the poor could be received and

disease studied by the medical students, Warren and Jackson began to exert themselves toward interesting the wealthy men of the town in the erection of a hospital in connection with the school of medicine. However, this country was at that time slowly drifting into the War of 1812; consequently the Massachusetts General Hospital was not completed until 1820.

Although the new hospital differed from other institutions of like nature in comparative elegance of its structure and accommodation, there were not at the time many who required its advantages; for, however poor, they preferred to be cared for at their own residences, and felt a strong prejudice against entering a hospital. It may be of interest to note that several weeks passed before its first patient found sufficient courage to seek admittance, and still another month before the second patient could be persuaded to enter its portals. One can readily see, therefore, that it took considerable time for the superior qualities of a hospital to be fully appreciated. Needless to say, Drs. Warren and Jackson were appointed chief surgeon and physician, respectively.

Among other pursuits, Dr. Warren found time to engage in many subjects of a literary and scientific nature and was invited to become a member of a society for the study of natural philosophy, founded by Dr. Kirkland in 1801. Other members of this group were Judge Davis, Josiah Quincy, John Quincy Adams, John Lowell and Dr. Jackson. Drs. Warren and Jackson early took it upon themselves to prepare the lectures on chemistry, and, in addition, the former engaged to deliver ten lectures on human and comparative anatomy and physiology. At one of these lectures he used for discussion the analysis of the water of Boston. Apparently he must have devoted considerable time in its preparation, for it is said that he presented the subject to the society in so striking a light that it made a permanent impression on many of them. In fact, he ventured a petition to the legislature in 1820 to reconsider the water supply of Boston. However, his efforts were met with negative results and consequently the generous citizens of Boston were destined to wait approximately thirty years before this copious source of health and comfort became a reality.

A few years later when President Monroe was stating his famous policy to Congress (1823), Warren decided to commemorate the battle of Bunker Hill. This Boston surgeon purchased three acres of land, including the top of Bunker Hill (originally called Breed's pasture), and, with donations received at the time of Lafayette's visit, had a monument erected on this historical spot. Later he procured two brass field pieces, which he presented to the Bunker Hill Monument Association.

The subject of agriculture also claimed part of his time. Indeed, he went so far as to offer a prize for the best essay dealing with manure, and proposed that a model farm be built in the near vicinity as an example to those ambitious farmers who were interested in keeping their own land up-to-date and flourishing.

While at Liverpool in 1837, Warren read a paper before the British Association giving, "Some Remarks on the Crania of the Mound Indians of the Interior of North America, as Compared with the Crania of the South American Indian of Peru." He did not set forth any claims to a discovery, as he might have done, but simply stated facts as they had come under his observation. However, most authorities will agree that some credit belongs to him for being the first to point out the probability of another and more advanced race having existed in the western country previous to those who were found there at the time it was discovered and explored by the Europeans. Returning to Boston the following year he resumed his labor, but decided to devote less time to the daily routine of professional visits except among the poor, and more time to the improvement of medicine and nearly related subjects.

During the nineteenth century, there were but two great contributions to surgery; more striking still, is the fact that both stand to the credit of the Anglo-Saxon race. The first was the overcoming of the ravages of sepsis with Lister's new antiseptic technique, and the second, the introduction of anesthesia, abolished the agonies and tortures of serious and protracted operations. Because of the horrors of the operating room we learn that Sir James Simpson nearly abandoned the study of medicine; that Abernethy and Cheselden dreaded every operation they performed; and that Warren frequently referred to the sinking of heart he

felt in the distress of every painful operation. However, to make a more vivid and indelible impression on your minds let me relate the story of Nathan Smith:

"With other pupils I accompanied the doctor to a distant town to see a capital operation. It was a case to excite commiseration. The patient was old enough to understand the purpose in hand, but not sufficiently mature to perceive its necessity. It was a chilly morning, as we sat by the fire, and the doctor looked at the patient at the farther end of the room. The lad was emaciated and trembling. Dr. Smith was visibly affected, his eyes dropped tears, and his heart trembled as he whispered to me, 'I shall not do what they expect! It is a cruel business, and I will perform a less severe operation, in hope that it will have the same effect!' . . . Before we returned to the room, he said to the attending physician, 'Hall, you know all about this boy's sufferings; at the moment we begin, bend over and across the bed to hide us from his sight, and do your best to comfort him,' . . ."

In the days immediately preceding the introduction of ether anesthesia, the two agents most commonly employed were opium and alcohol. The earliest period at which ether was mentioned under that name was by Godfrey in the "Transactions of the Royal Society" for 1730. Later, in 1818, Anthony Todd and Faraday both gave summaries of the knowledge then extant upon the use of ether. The latter stated that "when the vapor of ether mixed with common air is inhaled, it produces effects similar to those occasioned by nitrous oxide." Its use had undoubtedly proven dangerous and uncertain, for no mention was made of this anesthetic in the "Materia Medica and Therapeutics" published in 1832. So along with nitrous oxide, sulphuric ether was cubby-holed by the medical profession, permitting them to become the toys of chemical laboratories and apothecary shops. As a matter of fact, however, itinerant lecturers, notably a certain G. S. Colton, roamed about the country giving popular exhibitions of the exhilarating effects produced by the inhalation of these substances.

It is not surprising, therefore, that under such circumstances the young and recent graduate of the University of Pennsylvania, Dr. Crawford W. Long, should hesitate in letting the world know the results of his meager experiments. On March 30, 1842, this Georgian country practitioner extirpated a tumor from the neck of James M. Venable while the latter was under the influence of ether. An assistant describes the event: "Dr. Long poured ether on a towel and held it to the patient's nose and mouth . . . and determined when the patient was

sufficiently etherized to begin the operation by pinching him. Then he gave me the towel and I kept up the influence by holding it still to the patient's nose. The patient was entirely unconscious."

It was not, however, until the appearance of the December issue of the *Southern Medical and Surgical Journal* in 1849, that Long's work became known. At any rate it arrived just in the nick of time to cause our Boston friends considerable worry, as if they had not already sufficient to occupy their whole attention,—but let us see what they had done!

During 1844 Dr. Charles Jackson of Boston had received a certain shrewd young dentist, William Morton, into his family as a medical student. Soon after, Morton, at the advice of Jackson, applied chloric ether to the gums of a patient in an effort to cause a painless extraction. Evidently he was successful for we learn that early in 1846 he began a series of experiments upon fish, dogs and other animals. In addition to this he visited nearly all the druggists and chemists in Boston, buying a small quantity of ether at one place and at other places seeking all available knowledge as to its properties.

Finally, on September 30, 1846, our Boston dentist was ready for the crucial test—to produce a state of insensibility to himself by the inhalation of ether vapor. Suffice it to say that he was unconscious for about eight minutes, and that he must have been very happy when fortune favored him again that evening with the appearance of one Eben Frost with a painful tooth to be extracted. In such a condition, we may conjecture that Frost was ready to submit to most anything, whether mesmerism, hypnotism, or the inhaling of some mysterious vapors from a towel; and so within twenty minutes the dreaded ordeal over, and the patient was ready to sign an affidavit confirming the painlessness of the procedure.

It is quite natural that on the following day Morton should relate the events of the previous night to his preceptor, and urged that arrangements might be made for a public demonstration. However, both Morton and Jackson were more human than ethical, for when the former let it be known that the tell-tale odor of the ether might give away their secret, the latter suggested that it could be effectually disguised by the addition of a French Essence.

Warren at this time was sixty-eight years old and assumed a great responsibility, putting his life's reputation at stake when he agreed to give this substance a trial, following the young dentist's convincing story. Likewise Gilbert Abbott merits our respect in voluntarily offering himself as a patient to this startling experiment which took place on the sixteenth of October, 1846.

Although the anesthesia was not perfect, the tumor was successfully removed from the jaw of young Abbott before the crowded amphitheater of the Massachusetts General Hospital. Immediately after the operation, Dr. Warren turned to those present and said: "Gentlemen, this is no humbug. The conquest of pain has been achieved."

Now that the experiment was safely over, one finds post-operative complications in the form of bitter disputes, harsh denunciations, and lawsuits. Finally, a few years later, when Boston finally decided which of its citizens should receive tribute for this epoch-making discovery, Long's authenticated reports appeared on the scene and so killed a bill in Congress for the appropriation of a one hundred thousand dollar bonus to Mr. Morton. One may truly state, however, that the general use of ether in surgery came only after the surgeons of the Massachusetts General Hospital had operated on persons anesthetized by Morton in October, 1846.

Just previous to the aforesaid demonstration, Dr. Warren had been utilizing nearly all his spare time in championing the temperance movement and in the preparation of a treatise on alcohol and its effects. Consequently, he now set himself to the task of relating his experience with ether as an anesthetic. His first article appeared about a year later under the title of "Etherization with Surgical Remarks." By this time, however, Simpson in Edinburgh was introducing chloroform, its use in America being immediately opposed. Sensing a moral obligation to his profession, Warren, with added vigor, published two articles—"Effects of Chloroform and Strong Chloric Ether as Narcotic Agents," and "More Deaths from Chloroform." It was undoubtedly the same influence which led Oliver Wendell Holmes to write in his "Meeting of the Alumni of Harvard," "We've tried reform,—and chloroform, and both have turned our brain."

Having led such an active life in public

service, Dr. Warren was beginning to feel the weight of his years, and so, having handed in his resignation, he delivered his last lecture to an audience crowded with students and friends, early in the spring of 1847. For more than forty years he had always striven to promote the character of the medical school, and because of his persistent efforts and valuable service he was chosen Emeritus Professor of Anatomy and Surgery.

Now that he had been relieved of his daily lectures Warren had no intention of spending the remainder of his days in idle meditation by the fireside; on the contrary, he seems to have made double use of his time. The American Medical Association, which had been founded and organized in Philadelphia in 1847, chose Warren its president two years later.

In 1851, the year previous to Pierce's election by the Democrats, Dr. Warren decided to take another trip to Europe. Although it was supposed to have been a pleasure trip, the greater part of his time was spent in examining fossils and making collections for the various societies at home. Furthermore, he took the opportunity of renewing the various acquaintances he had established, with the most distinguished surgeons of England and France, which he had maintained since his earlier trips, by constant correspondence. Consequently, he was able to make himself familiar with all the modern improvements and so introduce into this country the most recent advances in European surgery.

In severing his connections with the hospital two years later, his loss was deeply felt,

for, although many other distinguished surgeons were associated with the institution, Dr. Warren had always held the first station, and, as we have seen, this was not unwarranted. Although this period might be said to be the completion of his surgical career, it was not the end of his indomitable spirit and zeal which ever strove for the betterment of society. Thus we find him continuing his lectures to the natural historical society, corresponding with his friends, examining anatomical specimens and preparations, etc., until just a few days before his death. The name of John Collins Warren was stricken from the roll of living men on May 4, 1856.

It has been said that there were few men living during this period who stamped their character more distinctly upon their associates than did Warren. He entered life with singular advantages. His father was the leading surgeon in one of the largest cities of this country, and his uncle, General Warren, had added further glory to the name he bore. Consequently, he was reared in an atmosphere of study and refinement and was thoroughly educated in the work in which he took his greatest pride. Although a bold operator, he always preferred security to dexterity or rapidity. Early in life he distinguished himself as a zealous and successful teacher, and remained foremost in every undertaking calculated to better medicine, literature and science. Similarly, he never wearied in the cause of benevolence. One may truly say that John Collins Warren earned for himself a most enviable reputation, which will be associated with his name throughout the ages.

ROENTGEN RAYS AND RADIUM IN TOXIC GOITER AND HYPERTHYROIDISM

In a discussion of the clinical course of toxic goiter and hyperthyroidism following treatment with roentgen rays and radium, J. Thompson Stevens, Montclair, N. J., calls attention to the fact that occasionally the patients suffer with increased toxicity for a few days following the initial treatments. Fortunately this is soon followed by relief and gradual improvement takes place. Nausea, vomiting and diarrhea, when present, are among the first symptoms to improve or disappear. Early during the course of active treatment the strength begins to improve and pruritus disappears. Soon the weight increases, while palpitation, tachycardia, tremor, dyspnea and the tumor decrease and finally disappear. At this time the basal metabolic rate will generally be found to be within normal limits. The eye symptoms are among the last to disappear, and in some cases the exophthalmos never completely disappears.

This is also true in cases treated surgically. In patients who have had severe thyroid intoxication for months or years, myocarditis frequently develops. In these cases the pulse rate is lowered but may never return to a perfect normal, no matter what the method of treatment, whether radiologic or surgical. If toxic goiter is superimposed on simple goiter, cystic goiter and other forms, the original tumor remains after treatment, and the enlargement of the gland appearing at the time of the development of toxicity disappears. In hyperthyroidism, *i.e.*, thyroid intoxication without enlargement of the thyroid gland, superimposed on simple goiter, cystic goiter and other forms, treatment is not followed by any reduction in the size of the primary tumor. Correctly applied radiation therapy is second to no other method of treatment, and may be expected to cure from 85 to 90 per cent of persons with toxic goiter and hyperthyroidism.—*Journal A. M. A.*

MICHIGAN'S DEPARTMENT OF HEALTH

C. C. SLEMONS, M.D., Dr.P.H., Commissioner
LANSING, MICHIGAN

MEASLES—PREVENTION AND MODIFICATION

The importance of measles as a major factor in the causes of death among young children is well recognized. Measles is very communicable. Few people in civilized countries reach adulthood without experiencing a more or less typical attack. An epidemic in a community usually subsides only when the number of non-immunes remaining is so small and scattered that there is no longer the necessary inflammable material to keep up the conflagration.

Efforts of health officials to stop or cut short an epidemic of measles are nearly always futile. Most good has probably been done by endeavoring to isolate certain of those who have not been exposed (such as those under four years of age and malnourished children) rather than quarantine the cases. Communicability is of short duration and is greatest before the usual time of discovery and reporting of the case. The causative organism of measles is not generally recognized as having been definitely ascertained.

Many workers during the last few years have been endeavoring to find a practical and successful method of either modifying the severity of the disease or of complete passive immunity. In this work many different products and methods have been tried. Not all investigators have reported favorable results and the merit of each of those products resulting from animal inoculation is still in doubt.

The value of convalescent serum in prevention or modification of measles after exposure is generally agreed upon. There is undoubted proof that measles can be prevented by sufficient dosage of convalescent serum within two or three days of exposure or that with somewhat less dosage or a slightly longer interval (four to five days) after exposure, the attack of measles which generally follows is quite atypical, mild, free from complications and yet results in a permanent active immunity. The chief difficulty in the way of adoption of the use of convalescent serum is that of securing it in sufficient quantities and of distribution, while still potent, to cases where indicated.

The method of prevention or modification

of measles which at present seems to hold the most promise is that of use of whole adult blood. There are yet many things to be learned about this procedure. It has been tried by enough observers and in enough cases so that we can say it has merit. The blood of most adults who have had measles will protect completely against measles or modify the attack if injected intramuscularly in an exposed individual, in sufficient dosage and at the proper time.

If the right amount is given at just the right time after exposure, a modified attack of measles will follow, which is not at all serious, is free from complications, and yet creates an active permanent immunity. If the same dosage is given a little sooner after the exposure, a complete passive immunity will follow but this leaves the individual susceptible again in two or three weeks. Even with the present handicaps, this method has been found by a number of observers (Barenberg, Lewis and Messer, Siegel and Erman, Marales and Mandry) to be of definite value for infants and young children who have been exposed.

More than 80 per cent of the deaths from measles occur in children under five years of age. Many of the deaths in those older than five are children already "under par" physically. It is these children who should have the protection given by the use of whole adult blood.

Surely there are many parents who can be taught to be on the lookout for measles. It is a distinctly seasonal disease. It comes in cycles of three or four years. Therefore, we can predict in any given community with a fair degree of certainty when an epidemic will make its appearance. It should be possible for a limited time to keep the public "keyed up" to a situation to make them "measles minded." The chief factor in making use of whole adult blood for the general population is just what we find in all health work. It is a question of education.

Preceding the time when an epidemic of measles may be expected, every channel possible should be used, such as the press, circular letters to parents of children under five years of age, and home visits, to educate the parents to be on the lookout for measles. This is, of course, a proper function of the

departments of health. Parents should be told to report promptly to their physicians if they know their child is exposed. Physicians and parents must recognize that results are not always what we hope for because we do not know the exact amount of blood to give in any given case, but we have enough knowledge to justify a trial on a large scale. May we not appeal to all health workers, to all physicians in Michigan, to give this procedure a real trial this coming year?

The securing of whole adult blood and its intramuscular injection is much facilitated by the use of sodium citrate. Ampules of this all ready for use may be secured by physicians from the Michigan Department of Health. Directions for its use and suggestions as to technic for the entire procedure are enclosed with each ampule.

A donor should preferably be an older brother or sister, of 14 years of age or more, or one of the parents. (If any other donor is used, the question of syphilis is always an issue. We strongly advise that no other donors be used.) The donor should have a definite history of a previous attack of measles; the more recent the attack the more potent will be the blood, other things not considered. A dosage of not less than 20 c.c. of whole blood is recommended, half of this to be injected into each upper inner quadrant of the glutei muscles.

If this amount of blood is given not longer than seven to nine days before an exposure to measles or more than five days after the exposure, either a complete protection or a modification of the attack will result in most cases. If an active permanent immunity is desired the blood injection should be made between the fourth and sixth days, preferably on the fifth.

C. D. BARRETT, M.D., C.P.H.

CONFERENCE ON CHILD HEALTH AND PROTECTION

The Governor's Conference on Child Health and Protection held in Lansing on November 9, 10 and 11, registered 913 delegates and attracted audiences that numbered many more than that. In point of size, number of agencies represented, and prominence of people attending it, it was undoubtedly the most important gathering on child health and welfare ever held in Michigan.

Pediatricians were well represented at the opening session on "Medical Service," with

Dr. Carl F. Moll presiding. Dr. H. E. Barnard, Director of the White House Conference, gave the introductory paper, stressing the putting into action of the findings and recommendations of the White House Conference on Child Health and Protection. Dr. Norman F. Miller, Professor of Obstetrics and Gynecology of the University of Michigan, discussed "Obstetrics and Child Welfare," taking up the situation as it is shown by maternal and infant mortality and morbidity statistics, the quality of obstetrics as practiced today, the education of the laity, the financial aspect of the problem, birth control, and the education of the physician.

"Medical Service for Children in Michigan" was presented by Dr. J. D. Bruce, Director of the Department of Post-Graduate Medicine of the University of Michigan. Dr. Bruce discussed the training of physicians and nurses in pediatrics, the possibilities in the fields of psychology and psychiatry, and the contribution of individuals and groups in Michigan to the medical and semi-medical care of children.

Dr. R. E. Patterson, President of the Michigan State Dental Society, gave the dental point of view in his paper on "Michigan's Dental Program for Children." This included a report of the work of the agencies in the state concerned with dental service for children, a résumé of the research being carried on, and an explanation of the program being sponsored by the State Dental Society for the education of dentists already in practice.

The report of the Committee on Medical Care for Children of the White House Conference relating to medical and dental service for preschool children was presented by Dr. George Truman Palmer, Director of Research of the American Child Health Association, and concluded this session.

The Governor's Dinner on Monday night, with Governor Brucker, Katherine Lenroot, Acting Chief of the Federal Children's Bureau, and Dr. Hugo Freund as speakers, was attended by 730 people.

"Education and Training" was the topic of the Tuesday morning session, which brought school administrators from all over the state, and "Welfare and Rehabilitation" featured the Tuesday afternoon meeting, with social workers present in large numbers. The concluding session on Wednesday morning was devoted to a discussion of "Public Health Administration."

CHILD HYGIENE ACTIVITIES

Gratiot County is having a diphtheria immunization campaign, with the treatments being given by local doctors assisted by Nell Lemmer, Caroline Hollenbeck, and Julia Clock, staff nurses of the Bureau of Child Hygiene and Public Health Nursing. It is expected that the program will be completed by the first of the year, and that approximately 4,000 children will have received the complete series of treatments.

Women's Classes in Child Care are being conducted by Dr. Ida Alexander in Bay County, with a weekly attendance of 300 women. A series of Women's Classes has been begun by Helen Linn in Huron County, Miss Linn having completed the work in nutrition that she has been carrying on in conjunction with Dr. Alexander's classes in Bay County.

A diphtheria immunization campaign in Delta County is being organized by Annette Fox, district supervisor of the Bureau of Child Hygiene and Public Health Nursing. Local doctors are giving the treatments, assisted in many instances by local nurses. More than 3,000 children are receiving the treatments in Delta County at this time.

Bertha Cooper and Beatrice Ferriby, staff nurses of the Department, are completing Child Care Classes in Allegan and Sanilac Counties. The week of December 7, Miss Cooper will begin similar classes in Van Buren County, and Miss Ferriby in Osceola County.

Dr. Muriel Case is at present giving talks on Child Care in county normal training classes, as a part of the demonstration-lecture course on applied hygiene carried on by the Department of Health and the Department of Public Instruction.

L. R. S.

ENGINEERING NOTES

The state sewage disposal program is progressing steadily. A new plant was put in operation at Flint the latter part of November, and the Muskegon Heights plant was formally dedicated early in December.

Since the going into effect on September 17, of the new law requiring that permission for construction of any water or sewerage system be secured from the Michigan Department of Health before work is started, 64 such permits have been issued. The present situation promises to be a very definite improvement over that in the past, when approval of the department was required only after construction was completed.

Action taken by many municipalities throughout the state to relieve unemployment by building programs has resulted in many instances in the speeding up of construction of water and sewage disposal systems. In several cities, projects have been authorized that would normally have been a later development.

E. D. R.

SUPRAPUBIC PROSTATECTOMY

Oswald Swinney Lowsley and Thomas J. Kirwin, New York, believe that the surgeon operating on the prostate must adapt the procedure employed to the special needs of the patient involved; there can be no routine technic applicable to all cases. Suprapubic prostatectomy is a one-man operation; perineal prostatectomy requires coöperation of a trained team. If the prostatic hypertrophy has dilated the internal sphincter, enucleation of the gland is better done by the suprapubic route. When the enlarged gland has remained within its natural anatomic limits, it can be reached more safely and conveniently by way of the perineum. The authors prefer the technic of suprapubic prostatectomy devised by Freyer over thirty years ago; that is, enucleation of the gland through an incision in its capsule, using the finger to detach it from the capsule, and observing great care not to injure the plexus of Santorini situated at the top of the vesical sphincter, as such injury is likely to induce severe hemorrhage. As suprapubic enucleation is prone to tear the mucosa from the verumontanum, thus exposing the orifices of the ejaculatory ducts to infection, a bilateral vasectomy should always accompany suprapubic prostatectomy. Preliminary drainage is a prerequisite to successful prostatectomy but may be accomplished in a number of ways, according to the needs of the individual patient. Cystotomy employing MacGowan's transverse incision, vesical puncture with Kidd's instrument, and the indwelling catheter have all given satisfaction.—*Journal A. M. A.*

CAUSE OF OBESITY

In order to study obesity satisfactorily, it was necessary for L. H. Newburgh Ann Arbor, Mich., to devise methods for the measurement of total heat production and of water exchange. After an accurate record of the inflow and outflow of energy, organic solids and water had been obtained, it was found that the actual body weight always corresponded with that required by the conditions. The author believes that there is no specific metabolic abnormality in obesity. All obesity is "simple obesity." The increase in weight merely represents an inflow of energy greater than the outflow. Failures of the primitive instinct to adjust the inflow of energy to the bodily needs is always the immediate cause of both leanness and obesity.—*Journal A. M. A.*

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JANUARY, 1932

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon

EDITORIAL

THE NEW YEAR

With this number of the Journal we add the first monthly installment to Volume XXXI. The twentieth century was a year old when the Journal of the Michigan State Medical Society was born. In the present period of its lusty youth it has attained between 950 and 980 pages, double column. The growth may fairly indicate the increase in the number of doctors in this state, accompanied by the fact that physicians are becoming more scientific in the way of careful observation and making record of their findings. The policy of this Journal has been to permit and encourage free and honest discussion of the various subjects pertaining to medicine and surgery and its various

branches as well as of the social and economic phases of medicine.

The new year has been associated from time immemorial with resolutions, so that January is often a graveyard of stillborn resolutions. We cannot say that they are in vain though soon broken. They indicate at least the recognition of ideals.

Among the resolutions for 1932 we may suggest one to make Volume XXXI of this Journal better than any of its predecessors. This cannot be accomplished by the editor alone. His part is comparatively unimportant. The task must be undertaken by its contributors and the resolution is not difficult to keep. Ideal contributions are those based upon carefully studied cases, hence the importance of the case history. A worthwhile hobby is the practice of writing clear forceful English. The two combined, careful study and observation and the embodiment of the findings in a thoughtful paper will produce a better journal, and both reader and writer will be gratified with the result.

THE CARE OF SICK VETERANS

Among the much discussed topics that pertain to medicine is that concerning the medical care of veterans of the world war. At the meeting of the National Defense Committee of the Detroit Board of Commerce, held on November 18, 1931, Dr. Angus McLean explained, in connection with the proposed Federal Act, a plan which would save hundreds of millions of dollars to the American taxpayer (and the veteran is a very important taxpayer) and at the same time assure prompt and efficient medical and hospital services to veterans of the world war. He said that 130,000 new beds would be required to take care of the veterans. If these beds were to be provided, it would be at a cost of \$3,500 each. There were at present fifty-three veterans' hospitals in the United States. Not only would there be the initial government outlay for the 130,000 beds, but there would be the problem of equipment and maintenance, including the professional staff necessary to man hospitals, and an additional item, namely, the transportation of veterans from their homes to these institutions. It has been estimated that there are at present approximately 319,000 empty beds in the various

civilian hospitals throughout the United States.

However, the important thing to consider, a point stressed by Colonel P. D. Foster at the same meeting, is that the people of the United States should think of the sick veteran and his *prompt* treatment when needed. It will take considerable time for the government to provide the necessary accommodation in hospitals under government ownership and control, while the need for hospitalization is immediate. It is estimated that there are at present 470 veterans in this state who should be hospitalized but cannot be handled in the regular way on account of lack of facilities. In many parts of this state, a veteran taken down with pneumonia or acute appendicitis would require to be transported, in some cases, several hundred miles to a government hospital. Often the man's chances for life even would be greatly affected by the lapse of time and the disturbance incident to conveyance to a hospital. Why not use the empty beds of the civilian hospitals already in existence? And why not permit the veteran to select his own doctor and to receive medical care according to his own wish. The opportunity for immediate care preferably by some physician of his choice should appeal most strongly to the person who is ill.

Abundant hospital space is now available without waiting for new government institutions to be built. The United States contains physicians eminently qualified to take care of medical or surgical emergencies that might arise. Why should these doctors not have the opportunity to serve their patients who happen to be veterans of the world war? The advantage in the way of promptness and efficiency must be apparent to all who give the matter consideration. Counting the cost, the veteran is also very much a citizen and taxpayer. He is considerably older than he was the day the armistice was signed. He has assumed obligations which make extra taxation a serious burden to him.

To investigate the medical phases of the subject, President Carl Moll of the Michigan State Medical Society has appointed the following committee: Dr. Angus McLean, Detroit, Chairman; Dr. J. G. R. Manwaring, Flint; Dr. Robert Harkness, Houghton; Dr. W. E. Wilson, Grand Rapids; Dr. W. C. Ellet, Benton Harbor. This committee has been carefully chosen and can be depended

upon to render sound advice on the subject of medical care of veterans who are or may become ill.

FOR YOUR OWN PROTECTION

"On numerous occasions, the Committee on Medical Defense of the Ohio State Medical Association has emphasized and cautioned the members of the State Association regarding the importance of the use of the X-ray, especially in fracture cases, and the careful preservation of X-ray films, prints and reports as a part of the physician's armament in the defense of suits and threats for alleged malpractice." *Ohio State Medical Journal*.

The members of the Michigan State Medical Society have been advised repeatedly by none more insistent than the late Dr. F. B. Tibbals, Chairman of the Executive Board of Medical Defense and by his successor, Dr. W. J. Stapleton. Owing to the economic depression, unemployment, the attempt to avoid the payment of fees for medical services brought about by the efforts of physicians to collect delinquent accounts, it would seem that there is a gradual increase in the number of suits and threats for alleged malpractice. In some states the State Medical Association will undertake the defense of physicians so charged only on condition that the defendant has taken the precaution to keep on file or to have available radiographs and X-ray reports of fracture cases, unless it can be shown that conditions made it impossible to secure an X-ray examination.

Many physicians who confine their work exclusively to roentgenology find a growing disposition on the part of physicians to omit X-ray examinations, out of consideration for the patient, in the way of saving him the expense. The patient, however, has not the same consideration for his physician in the event of an unsatisfactory result. The X-ray specialist is the best witness a physician charged with malpractice can have if the physician has done his full duty in regard to insisting upon X-ray examination in all doubtful cases. And we might add, every case of apparent sprain may conceal a fracture.

The advantage of X-ray examinations by a properly qualified roentgenologist is obvious. Besides his experience in the making and interpreting X-ray films, careful reports are made at the time in duplicate, one filed and one sent to the referring physician. The films are also preserved and available,

and capable of being identified when called for.

The physician who makes his own X-ray examinations may be as capable as the physician who limits his work to Roentgenology. He should, however, be just as careful and exact in the preservation of plates and records as if he were devoting his whole time to it.

Not only in accidents in civil life but in all industrial injuries where compensation is an added factor it is well to exercise the utmost care in regard to radiographs and records. In the care of injuries, especially where bones are involved, there is no factor more important than an X-ray examination made by one who is devoting all his professional time and effort to it. The courts of the state are more and more stressing the qualifications of the X-ray examiner as expert witness.

SECURITY

Security may be said to be a primal urge of man, though it has been expressed in various other ways. Goethe once said that the primal urges were *hunger und liebe*, self-preservation and the perpetuation of the species. The first efforts towards human society had as their objective protection, protection against wild animals and against human foes. The group and the herd owe their origin to the protective instinct or desire for security. As society became more complex man built fortresses. Still later, on the principle of division of labor certain portions of the population were set aside for the protection of the whole. Hence we have the growth of armies and navies. Then there was the desire for protection against disease, and sanitation and preventive medicine are the result of a further division of labor.

With it all, the development of civilization failed to give economic security to man. This he has endeavored to build for himself with varying success, so that today, with the stress of the present depression, we have lack of security or protection, not only in our daily work, but in our investments, as well as our general business and professional lives.

The condition in which the world finds itself at the present time is apt to have as its worst feature the diffusion of an anxiety complex in which anxiety and fear supplant courage. What is needed is a situation

which will conduce to the economic security of the individual, as the evolution of society has already produced a certain immunity from attack by physical foes as well as disease.

SCIENTIFIC OUTLOOK.*

This is the title of Bertrand Russell's latest book. While not in any sense a medical work, probably medicine is as closely connected with science as any other of the learned professions. Our belief that the subject is one which naturally interests our readers is our only excuse for dealing with it here. Bertrand Russell comes of a very distinguished ancestry, a great grandson of Lord John Russell of Reform Bill fame of 1832. He has succeeded to the title of Earl of Russell with a seat in the House of Lords in England. Bertrand Russell, however, is still philosopher, mathematician, scientist and humanitarian. As philosopher, mathematician and scientist probably no other living person is more entitled to a hearing. Had he lived during the middle ages, it has been said, he would have been burnt at the stake long before he could have written a volume of his characteristic essays. His skepticism is that form of doubt that asks only for an open mind and belief only on evidence. In his early life Russell was almost wholly absorbed in a study of the abstract. The present trend of his mind is towards the solution of sociologic problems and the advancement of civilization by education.

* * *

Bertrand Russell begins by venturing that our predecessors, could they view it, would consider the present so-called scientific age very scientific, whereas our successors would hold to the opposite opinion. While art and religion are as old as civilization, science in a strict sense is only 300 years old, for half of which time it was confined strictly to the learned. Today it affects the lives in one way or other of the whole human race. "One hundred and fifty years of science," says he, "have proved more explosive than five thousand years of pre-scientific culture."

Science as the pursuit of truth has concerned thoughtful men, but it has taken second place to science as power of manipulating nature. Science as technic has profoundly affected the functions of govern-

*The Scientific Outlook. By Bertrand Russell. W. W. Norton & Company, Inc.

ment and is beginning to modify family life. Medicine is pragmatic; while in no way minimizing truth for truth's sake, it values for its utility any contribution from physics, chemistry or biology.

Bertrand Russell goes on to show that the ancient Greeks were not essentially a scientific people. They scorned experimental studies. In their philosophy and mathematics their thought processes were deductive, not inductive. Archimedes was the only Greek scientist and the Greeks apologized for him. Recently we noted the fact that the ancient Greek had no conception of the idea of progress.* They believed in more or less fixed cycles in which the age repeated itself without change. This fact would go to confirm the statement that the ancient Greek was unscientific. Science and progress have been coeval.

Then during the later dark ages came the Arabs who made experiments in chemistry or alchemy endeavoring to turn the baser metals into gold. They sought also an elixir of life. They carried on the tradition of civilization but were interested only in detached facts, not at all in general principles or laws.

* * *

The first scientist of modern times was Galileo, who lived during the seventeenth century. This century marked the beginning of the scientific era. So important was it that the author says, "I believe if one hundred men of the seventeenth century had been killed in infancy the modern world would not exist. And of these hundred Galileo is the chief." The seventeenth century was the century of Harvey, Sydenham, John Locke and Newton, and a great legion of post-Vesalian anatomists.† It is significant that the century which gave Galileo to the world also gave birth to modern medicine. Russell comments at length on the work of Newton, Darwin and Pavlov as outstanding examples of the scientific method, which consists, first, in observing significant facts; second, arriving at a hypothesis which if true would account for these facts; and, third, in deducing from the hypothesis consequences which can be tested by observation.

All exact science is dominated by the idea

*Progress. Journal of the Michigan State Medical Society. Vol. XXX, Page 962.

†The following lived and worked during the seventeenth century: Asseli, Bartholin, Wirsung, Highmore, Glisson, Willis, Havers, Malpighi, Bellini, Pacchioni, Schneider, Swammerdam, Hooke, Loenwenhoek.

of approximations. The scientist even in his most careful measurement always makes reservation for probable error. Such is the situation in the purely intellectual domain. It is only in matters in which truth is not ascertainable that one is apt to be dogmatic and unwilling to admit any error in his opinions. The less reason a man has to suppose himself in the right, Russell maintains, the more vehemently he asserts that there is no doubt whatever that he is exactly right; witness the attitude of the politician or the so-called social reformer. No man, he says, who has the scientific temper asserts that what is now believed in science is exactly right. It is a stage on the road towards exact truth.

This is refreshing. One should not look for finality in human knowledge. If this is true of such subjects as physics and chemistry, how much more does it apply to biology, of which medicine in its broadest phases is but a branch. In physiology it is impossible to give quantitative precision to Pavlov's laws concerning conditioned reflexes.

* * *

Space will not permit an adequate review of this stimulating book in which Bertrand Russell's lucid style enables him to present a difficult subject in a popular form, at least for the comprehension of the generally educated reader.

I turn to the final chapter. After picturing to us his idea of a scientific society we have a concluding chapter on Science and Values. He emphasizes the two aspects of science, namely, science as a search for truth and science as a technic which gives men power over nature. In this connection I would quote from a recent work by Graham Wallas‡ in which he agrees with Bertrand Russell, maintaining that "during the last two centuries men have enormously increased their power over nature without increasing the control over that power by thought." The present depression is largely the result of lack of control by thought over the power that three centuries of science has given us.

To return to Bertrand Russell: the impulse towards scientific construction or power over nature is admirable when it does not thwart any of the major impulses that give value to human life. The danger to the

‡The Art of Thought. By Graham Wallas.

world comes from a possible tyranny of what might result from unchecked scientific manipulation. Science, at first an interesting pastime, has come to dominate man and in a way rob him of his intellectual pleasure. The passage has been from *contemplation* to *manipulation*. In other words the power impulse in the development of science has prevailed over the love impulse. The power impulse is seen in industrialism and the mechanized age. Or in other words, "science in its beginnings was due to men who were in love with the world, who perceived the beauty of the stars and the sea, of the winds and the mountains." Men of old time let their thoughts dwell upon such things and there was a consequent desire to know more of them. The impulse of love has been overshadowed by the impulse of power so that we have the lover of nature baffled and the tyrant over nature enthroned. Power-knowledge has been substituted for love-knowledge. For this reason the author views the prospect of a scientific society with grave apprehension, since a scientific society would be incompatible with the pursuit of truth, art, and all those priceless things which make life worthwhile. The fact should not be lost sight of that power is not an end in itself, but a means to an end. As for the ends of life, that is for each individual to determine; no one should have the right to legislate for another in this regard. "For the individual the ends of life," says Russell, "are those things which he deeply desires and which if they existed would give him peace." Power will not do this; when one has power or wealth, which is in a sense the same thing, he wants more power and more wealth. These things do not satisfy him except for a time. Then the author goes on to say, "The lover, the poet and the mystic find a fuller satisfaction than the seeker after power can ever know." A world without delight and without affection is a world destitute of value. If science in its quest for power overlooks this fact its service to the race is very poor. Subservience to power over nature must give place to consideration of what is best in man.

INHERITANCE

Dr. Arnold Lorand, of Carlsbad, in one of his books, entitled "Building of Human Intelligence," says, "According to Galton's law, the characteristics of the children are inherited from the parents in 50 per cent of cases, from grandparents in 25 per cent and from great-grandparents in 12½ per cent, and only recently Peters was able to confirm the

correctness of this law with regard to mental faculties. Experience, moreover, shows that mental faculties of any kind may be inherited in the same family. Children of professional musicians are very often born musicians, as was, for instance, the case with Beethoven, Mozart, Haydn and particularly with Bach. In the family of the latter music was cultivated for hundreds of years back. Among the offspring of the distinguished Jacques Bernouille, most of them were excellent mathematicians. Charles Darwin's son was also a celebrated naturalist."

Characteristics may remain dormant in direct ancestors and come to light in the third or following generations. The illustration by Jennings is significant, when he says that individuals are like knots in a fishnet and that any preceding knot may have furnished qualities to us. It would seem that inheritance is of paramount importance, although other factors, for instance disease processes, may enter into the picture. Of course, environment plays another important part. To what extent proper environment can be utilized in shaping the destinies of the handicapped is magnificently illustrated in the Wayne County Training School under the masterly guidance of Dr. Robert H. Haskell. If so much can be done with the mentally handicapped, it can be understood easily that environment and proper measures can do a great deal for the ear-handicapped who have a sound mind.

Consideration of the facts stated, however, concerns everybody. If we admit the inheritance of mental qualities and if we consider how many unfit and criminally minded people have escaped from Europe, or have been sent to our country during many years, this aspect assumes great importance and it requires a great deal of thought.

Dr. Heck, at a recent meeting of teachers of the handicapped, of Michigan, has given his ideas concerning some aspects of the situation. It is very commendable that the question receives proper consideration. Dr. Heck has undertaken a task which merits the attention of teachers and legislators. Sufficient numbers of institutions or asylums do not exist to take care of the mentally handicapped. Many persons are in prisons who should be in asylums, and many are at liberty who should be confined in institutions. Psychopathic people exercise a detrimental influence and they can also easily be used by others for nefarious purposes. Insofar as children are concerned, the child guidance clinics are important links in the chain of endeavors aiming at proper adjustments.

—From *The Rainbow*, a monthly periodical edited by Dr. Emil Amberg, Detroit.

NEVER TOO OLD TO LEARN

(New York Times)

Professor Edward L. Thorndike has endeared himself by his philosophy to those of advancing years. He holds out hope to them that they will never be too old to learn.

After years of experiment, he has reached the conclusion that ability to learn increases until about 20, when it remains stationary for a time and then gradually declines, but so slowly that it will still be possessed even to the end life. No one, he has said, can excuse himself from attempting the conquest of new fields by claiming exemption on account of age. If one fails in learning, inability due directly to age will rarely be the true reason.

This encouraging philosophy also gives cheer to the young by recognizing the value of reward as compared with punishment in helping them to prepare themselves for taking over the world when the old have to relinquish their work. It follows Jeremy Bentham as regards punishment, who held that all

punishment "was in itself an evil," and that "upon the principle of utility it ought only to be admitted in as far as it promised to exclude some greater evil." But whether or not we go the full length of Dr. Thorndike's contention as to fines and jails and punishments, we are able to accept his thesis that "the real power lies in the rewards for decent behavior."

The spring of action is, in the main, for young and old alike, reward, though virtue may at times and for the few be its own reward.

AFTER THE ANTIVIVSECTIONIST

Th' ither day we had a meetin' o' th' antivivsectionists in ane o' the Taverns o' oor toon. There wer' a thrang o' saxty-five people cam' intil the meetin'. Th' ladies wer' a' fair an' cantie,—aye—an' winsom'.

Ane o' th' winsomest was sae pleas'ed that she telt th' crood she felt like Elijah, when he foond he had seven thoosan' freens wi' him. This minded me o' th' nicht I was wi' Billy Sunday when he had ten thoosan' five hunder wi' him. Man: but that was a graund nicht.

Anither o' th' women in a mair serious min', said that "Life o' a' sorts was divinely gi'en an' cudna juistly be ta'en awa'." Noo, that was nae verra nice o' her when sae mony o' her freens were sae snugly cuddl'ed awa' intil collars an' coats made frae animals wha' som' wan had kilt'ed.

Noo these people wale tae hae an ord'nance passed a' o'er oor bonnie state, sac that ye maunna kill any animals wi'ooot due process o' law.

Weel, a'm a' ready for the ord'nance. I ance wint doon tae Chicago. Ye ken, Chicago is ane o' thae toons juist outside o' the city o' Detroit. They hae ane o' thae big butcher shops in Chicago, an' man, if ye ever heard th' moo o' ane o' thae moo coos when a big man whacks her atween th' e'es wi' a sledge hammer an' she fa's doon in th' dirt an' wet. Aye, an' when ye see a big man stick a lang knife intil th' neck o' a bonnie wee lammie, or inither knife intil a wee bunny, til' its life's blud rins a' o'er its bonnie white neck,—yer hert sings awa doon tue yer knees, an' the' smell o' the' place sticks intil yer claes sae lang that ye hae time tae mak' a new year's resolutions ne'er again tae eat any meat wha has bin kilt.

When we a' come intil th' consistency o' this ord'nance an' free it frae a' spiritual ejaculations, we'll hae tae change oor mode o' livin' as weel as oor diet, an' that's what a' th' doctors hae been preachin' this mony a year.

A weel it's a graund nicht th' nicht.

WEELUM.

P. S. Mr. Editor, will you please let me know if Oysters an' Fried Frogs' Legs hae life.

FOOTBALL DEATHS

(The Nation)

Twenty-seven deaths—that is the toll taken by football this fall. "While the total is alarming," writes the New York Evening Post, "it is found that only five of the players killed this year were members of college squads." Pray what has that to do with it? The life of a high-school player is as valuable as that of a collegian; the death of one as profoundly tragic as that of the other; the family's grief and misery as acute in one case as the other. This figure does not include those hopelessly crippled, the many who are injured; one of the Fordham University players is coming back to "activity" in a paralyzed condition which may not yield while life lasts. Why should these casualties be tolerated? We do not deny that football has merits; that it is a challenging spectacle. But the game could be altered at the next session of those

who yearly meet to revise the rules, if they only desired to do so, and in such a way as not to deprive the game of its interest and thrill. If the president of Yale, within whose Bowl a West Point cadet was fatally injured this year, and two other heads of great universities would demand such changes as would minimize the risks, we believe the reforms would be made. It is true that the slaughter is not so serious as that during the hunting season—incomplete figures show 20 killed and 101 wounded in New York State alone in the pursuit of this sport; none the less the game of football can and should be reformed or else abolished.

STATE SECRETARIES AND EDITORS MEET

Once a year about the middle of November the secretaries and editors of State Medical Societies and State Medical Journals wend their way from north, south, east and west to Chicago, where as guests of the American Medical Association in the auditorium of 535 North Dearborn Street they meet for an annual two-day convention. What takes place is usually reported at length in the Bulletin of the American Medical Association, which is a welcome visitor to the desk of each fellow of the Association each month. The last meeting was held on Nov. 13 and 14, 1931. A summary account of this meeting is here given as written up by the editor of the New York State Journal of Medicine.

The Annual Conference of the Secretaries and Editors of the State Medical Society, conducted by the American Medical Association, was held on November 13 and 14, 1931, in the building of the Association at 535 North Dearborn Street, Chicago, Illinois. Those present from New York State were Dr. D. S. Dougherty, Secretary, Dr. O. S. Wightman, Editor-in-Chief, and Dr. Frank Overton, Executive Editor. Sessions were held on Friday morning and afternoon, with a noon luncheon between the two; and on Saturday morning. The Conference chose as its chairman Dr. Earl Whedon, Secretary of Wyoming State Medical Society, who used a loaded five-shooter as a gavel, explaining that the weapon was a badge of authority on his sheep ranch at home, even as a battle mace represents the national dignity and power in the English parliament. Dr. Whedon proved to be a diplomatic presiding officer who judged with promptness and diplomacy.

The speakers included representatives of the American Medical Association: Dr. E. Starr Judd, President; Dr. Edward H. Cary, President-Elect; Dr. Edward B. Heckel, Chairman of the Board of Trustees; and Dr. W. C. Woodward, Chairman of the Committee on Legislation. Then, too, there was Dr. Olin West, Secretary and General Manager, who was the genial representative and mentor of every State Society, giving a clear expression of the attitude of the medical profession toward the subjects discussed by the speakers.

"The Official Records of the Office of a State Secretary" was the subject of a paper by Dr. Emma W. Pope, Secretary of the California State Society. The ideal methods described by Doctor Pope may be found in actual use in the office of the Secretary of the Medical Society of the State of New York.

Dr. C. B. Conklin, Secretary of the Medical Society of the District of Columbia, spoke on some legal points in connection with the practice of medicine by corporations, involving the incorporation of county medical societies for the purpose of contracting to give medical services, as in Iowa. A corporation is an individual in the eyes of the law, but it cannot attend a medical school or be imprisoned, or make a diagnosis of sickness. A corporation must, therefore, act through hired physicians, thus opening up the question of relative responsibilities of the employer and his agent. While it seems to be a universal principle of all the States that a cor-

poration cannot practice medicine or law, doctors or lawyers may form partnerships in which the members do the actual practice as individuals.

Dr. J. H. Dempster, editor of the JOURNAL OF THE MICHIGAN STATE SOCIETY, spoke of the problems of an editor of a State Journal in making it a really representative organ of its society and the constituent county societies. Dr. O. S. Wightman, Editor-in-Chief of the *New York State Journal of Medicine*, spoke of the varied forms of the State Journals, each of which is adapted to its particular State. "The best Journal," he said, "is the one that is read."

"Medical and Hospital Service for Veterans" was the subject of an address by Dr. C. B. Wright, of Minneapolis. Doctor Wright explained that the medical profession was opposed to the bill to give free treatment to all veterans, insisting that the Government limit its action to disabilities incurred in actual service during the war. This attitude has aroused resentment among ex-soldiers, but the veterans were not satisfied with the provision of the United States Government that the patients must go miles away from home and undergo long delays in order to get treatment, some dying of acute appendicitis before they could reach a hospital.

Physicians generally accept the principle of free treatment to all veterans, because it is an established fact; but they advocate the principle that the treatment be given in the patient's own community by the doctor and hospital of his choice. The veterans are accepting this plan whenever it is explained to them. The speakers suggested that every medical society, from the State to the County, should get in touch with its Legion and explain the advantages of "home" treatment.

Dr. Rolin T. Woodyatt, of Chicago, advocated the use of the hospital and its staff as a practising group, basing his suggestion on his experience in the war, when a group of medical officers at an army camp gave treatment to the people of the town. He also had some experience with a similar group in Chicago.

Dr. A. N. Thomson, of Brooklyn, described the successful coordination of the civic activities of the five County Medical Societies of Greater New York through monthly meetings of their presidents and representatives.

Dr. A. H. Freiberg, of Cincinnati, explained the significance of medical leadership in directing the health activities of agencies of a governmental and civic nature.

The sessions closed with a discussion of medical service in Europe under governmental auspices, by Nathan Sinai, of Ann Arbor, Michigan. In discussing this paper, Dr. D. S. Dougherty, Secretary of the New York State Society, called attention to the difficulty of separating preconceived attitudes from conclusions reached after actual investigations.

One of the most valuable features of the Annual Conferences is the opportunity to meet the representatives of other states and discuss their mutual problems; but only a limited time is available for these meetings. Possibly the difficulty could be solved by holding an informal evening smoker where the members would feel free to become acquainted.

FOCAL INFECTION OF ANAL ORIGIN

According to Louis J. Hirschman, Detroit, the symptoms of autointoxication have been generally recognized as some disordered condition of the intestinal canal, and under proper therapy many cases have responded to treatment. What has not been generally recognized, however, is the fact that there is an area at the terminal portion of the intestinal tract that is a ripe and fertile source of local infec-

tion. He refers to the crypts of Morgagni, which are located at the junction of the anal canal and the rectum. These crypts normally secrete a thick mucus, which serves as a lubricant to the feces just before their extrusion from the anal canal. They vary from three to twelve in number and are recognized as openings in the mucous membrane, usually crowned by small papillae. When diseased, these crypts are red and the papillae are pinkish white, enlarged and elongated, sometimes polypoid. On examination through the anoscope with a hook-shaped probe or with one with a right-angled end, one can readily identify these crypts. Oftentimes, pus can be demonstrated in the crypts, and not infrequently a sinus or a blind internal fistula will be found leading from a diseased crypt. These sinuses will vary in length from one-half inch to 2 inches (1 to 5 cm.) and extend usually in a radial direction from the crypts. The crypts are large and more numerous and of greater capacity than tonsillar crypts. They infrequently cause any local symptoms; but when they do, the symptoms are quite characteristic. On account of the openings or mouths of the crypts being directed upward in a direction opposed to the fecal current, it is easy to see how irritating particles, such as bran, bits of bone, eggshell, oyster shell, vegetable seeds and skins, toothbrush bristles and other bit of foreign material are forced into the crypts during the expulsion of fecal matter. When material such as this becomes lodged in a crypt, it acts as a foreign body and irritant and causes ulceration followed by suppuration and absorption. It is with difficulty that any of these particles are dislodged, and they usually remain and either disintegrate or irritate the crypts and traumatize them, as has been mentioned. The author believes that anal cryptitis is probably the most frequently overlooked source of focal infection that is present in the human body today. It is a very simple matter to include in the examination of the patient the anoscopic examination previously mentioned. The proctologist who indulges in this as a routine will be rewarded by not infrequently being the first to discover that an anal cryptitis or a perianal sinus is a source of infection that has produced symptoms such as are illustrated by some of the seven cases briefly reported. The operative procedure for the removal of infected crypt and papillae is so simple under local anesthesia that it can be carried out without special training in proctology by any one who is accustomed to doing surgical work under local anesthesia. The technic of the operation is described in detail.—*Journal A. M. A.*

INCOMES AND THE DEPRESSION

The figures published recently by the Bureau of Internal Revenue reveal the following striking facts concerning the individual income of the American people during the depression:

INDIVIDUAL INCOME

Personal returns for the calendar year 1930 showed an aggregate net income of \$17,220,753,620, compared with \$24,294,609,739 for 1929. The drop in individual income during 1930, therefore, amounted to \$7,073,856,119, a decline of 29.1 per cent.

For the first eight months of 1931 the personal taxes received by the government amounted to \$473,689,563, compared with \$990,936,980 for the first eight months of the previous year. The decrease amounted to \$517,247,417, or 52.2 per cent. It occurred despite the fact that the tax rate for the calendar year 1930 was 1 per cent higher than in the previous year.

Tax returns for 1930 were filed by 3,376,552 individuals, as compared with 4,034,720 for 1929. Of

these, 1,429,877 paid no taxes, for the reason that they claimed exemptions exceeding their net income. There remain 1,964,675 people who paid taxes, as compared with 2,465,385 for the previous year.

The report shows a sharp drop between 1929 and 1930 in the number of persons with large incomes. People with incomes above \$1,000,000 decreased from 504 to 149; those with incomes between \$500,000 and \$1,000,000 decreased from 967 to 311; those with incomes between \$300,000 and \$500,000, from 1,622 to 551, and those with incomes between \$100,000 and \$300,000, from 11,608 to 5,141.

Considering next the sources from which income was derived, the figures of the bureau show that as usual wages and salaries were the most important item, amounting to \$9,380,995,395, or 43.3 per cent of the gross income prior to deductions. This figure compares with \$10,740,029,412 for the previous year, and indicates a decline of 12.7 per cent during 1930 in the wages and salaries of the 1,964,679 people who paid Federal income taxes.

The second largest source of income was dividends on stock of domestic corporations, amounting to \$4,089,625,612, or 18.9 per cent of the total income, compared with \$4,525,716,378 for the previous year.

These two items account for 62.2 per cent of the entire income of those who paid personal taxes. The remaining 37.8 per cent was derived as follows: from business profits, 11.7 per cent; from interest and other income, 8.2 per cent; from partnerships, 5.0 per cent; from rents and royalties, 4.7 per cent; from profits from sales of real estate, stocks, bonds, etc., 3.6 per cent; from capital net gains from sales of assets, 2.5 per cent, and from miscellaneous minor sources, 2.1 per cent.

Comparison with last year's returns shows that the reduction in what may be called speculative profits, combined with the increase in speculative losses, is greater than the decrease of earned income. The items under the heading of deductions labeled "net loss from sale of real estate, stocks, bonds, etc.," is larger than that for the previous year by only \$219,111,000, but "profits from sales" of such investments, added to "capital net gain from sale of assets," is smaller by \$3,359,497,000. This figure compares with a reduction of \$3,429,939,000 in income from wages, salaries, partnerships and business profits.—*From the New York Times.*

THE OUTCAST

I don't play bridge. I can't explain
Why this lack happens in my brain,
Nor why I feel no stab of shame
In saying that I loathe the game.

Perhaps my training was neglected;
Maybe my taste nerves are affected,
Or possibly the cause may vary
To hidden roots pituitary—

I cannot tell. Folks used to meet
And laugh and flirt and shake their feet,
But now they gather every night
And glare and grit their teeth and fight.

I don't like fighting either. I
Am just a wistful sort of guy
Who haunts card parties like a curse,
Regarded as a fool, or worse,
And just as welcome as a hearse.

Yet I would feel less like a dunce
If they'd play something else just once.

—Lowell Otus Reese.

From *The Rainbow*.

FACTS VERSUS FANCY

It has been said that the boy with the most facts in his head has the whip hand over anyone else. The purveyor of information may be also an intolerable bore. The *Manchester Guardian* poet visualizes a situation in which the pedant lost out.

I wooed her with lists of the Angevin kings,
Each date in its accurate place;
She seemed unimpressed by such recondite things,
And yawned in my resolute face.
I tried to subdue her with figures achieved
By mathematicians correct;
I have to report that their sums were received
Without the least sign of respect.

The findings of science I tried to present
On lines that were simple and sound,
And when she proved far from amused or content
I ventured on classical ground;
But the facts from the Peloponnesian War
Fell most unaccountably flat,
And Homer and Virgil she seemed to abhor
And "couldn't be bothered with that."

At every advance I was met with a check,
My courtship fell far in arrears;
Geology gave her "a pain in the neck"
And chemistry bored her to tears.
But now I can see that I vainly attacked
On lines that allowed me no chance—
Though males may be mastered by matters of fact
The female is ruled by romance!

FILAMENT-NONFILAMENT COUNT: ITS DIAGNOSTIC AND PROGNOSTIC VALUE

According to W. V. Mullin and G. C. Large, Cleveland, the filament-nonfilament count is a valuable aid in securing the clinical picture of disease, following more closely the course of the infection than the total leukocyte count and foretelling complications in convalescence. In nonfilament counts of 50 per cent and over, a very guarded prognosis must be given. The majority of such cases reach a fatal termination. The authors believe that filament-nonfilament counts may prove valuable aids in the differential diagnosis of infections from noninfectious allergies and arthritides. Filament-nonfilament counts may also prove a valuable basis by which to gauge the dosage of malarial injection in the treatment of syphilis.—*Journal A. M. A.*

STREPTOCOCCAL AGGLUTININS IN RHEU- MATOID ARTHRITIS

Edith E. Nicholls and Wendell J. Stainsby, New York, describe experiments in which they noted that the serum of patients with rheumatoid arthritis gives a strong specific agglutination reaction with "typical strain" streptococci recoverable from the blood and joints of patients with rheumatoid arthritis. Such a reaction suggests that this type of hemolytic streptococcus is of etiologic importance in the disease. A close antigenic relationship between "typical strain" streptococci and the hemolytic streptococci from scarlet fever and erysipelas is established. Rheumatoid arthritis can be differentiated from osteo-arthritis, chronic gout, gonococcal arthritis and other joint diseases by the agglutination reaction. The agglutination reaction, when supplemented by the sedimentation test, not only offers a valuable aid in differential diagnosis of arthritic conditions, but also affords an estimate of the activity of the disease and the progress of the patient.—*Journal A. M. A.*

OBITUARY

DR. JAMES CLELAND, JR.

Dr. James Cleland of 85 Chicago Blvd., Detroit, died on December 10 at Battle Creek after a long illness. Dr. Cleland was born in Glasgow, Scotland, and came to the United States with his parents at the age of two years. He was educated in the Detroit public and high schools and graduated from the Detroit College of Medicine in 1884. He had practised in Detroit since his graduation except for periods spent in post-graduate study at the College of Physicians and Surgeons, New York, and at Edinburgh, Scotland. He was formerly associated with his uncle, Dr. Henry Cleland. Dr. Cleland was a member of the Wayne County, Michigan State and American Medical Associations, and the Detroit Medical Club. He is survived by his widow, Mrs. Anna E. Cleland, three brothers and three sisters.

DR. ISAAC NEWTON MONFORT

Dr. I. N. Monfort died at his home in Detroit on December 20 at the age of 85. He was born at Disco, Macomb County, Mich., in 1846, and began the practice of medicine at Ithaca, Michigan, in 1877, continuing to practice there until he retired in 1915. Dr. Monfort was one of the older type of general practitioner whose work included everything a physician is called upon to do in a rural community, emergency surgery as well as medicine. During his active years of practice Dr. Monfort was an extensive and discriminating reader of medical literature. He did not hesitate to carry out in his practice, often amid adverse surroundings, methods which appealed to him in his reading. Dr. Monfort was a member and past-president of Gratiot County Medical Society and also a member of the Michigan State Medical Society during his active life. Dr. Monfort's father was a member of the first legislature of Michigan. He is survived by five children, Dr. Willard Monfort and George J. of Detroit, Frank R. of Los Angeles and two daughters, Miss Edith May of St. Johns, Mich., and Miss Dorothy Monfort of Detroit.

RESULTS OF SYMPATHETIC GANGLIONECTOMY AND RAMISECTOMY FOR CHRONIC ARTHRITIS

James R. Moore, Jerome, Ariz., records some personal experiences in the onset, progress and treatment of arthritis, especially the reaction which he, as a physician, has experienced in the newer surgical methods of treatment; *e.g.*, a quadrilateral sympathetic ganglionectomy and ramisectomy. He summarizes his experiences thus: A case of arthritis developed without antecedent illness in himself, aged 36, when he had resided for many years previously in a warm, dry climate. The case became progressively worse in spite of the elimination of possible foci of infection combined with the usual and recognized methods of treatment, pursued over a period of three years. Marked improvement both subjectively and objectively and at least an apparent arrest of the progress of the disease were observed in both the upper and lower extremities following a quadrilateral sympathetic ganglionectomy and ramisectomy. Improvement in general health and mental attitude followed closely on relief of the local joint condition. The author would not hesitate to recommend to any one suffering from arthritis the radical surgical procedures referred to, provided a fair trial had been given other recognized modes of treatment and the signs in the case were such as would indicate in the light of past experience that a favorable result might reasonably be expected.—*Journal A. M. A.*

COMMUNICATIONS

AMERICAN ACADEMY OF PEDIATRICS

636 Church Street
Evanston, Illinois

Dec. 10, 1931.

Dr. F. C. Warnshuis,

148 Monroe Ave.,

Grand Rapids, Mich.

Dear Doctor Warnshuis:

You will find below the names of the representatives of the American Academy of Pediatrics who constitute the State Committee in your State.

They will be ready and willing to co-operate with you in any way which you may deem advisable regarding the health conditions of children in your State.

This letter is simply to call your attention to the fact that there is a group of well-intentioned pediatricians who hope to be useful.

Yours sincerely,

CLIFFORD G. GRULEE,

Secretary.

Thomas B. Cooley, 7815 Jefferson Blvd., Detroit (Chairman)

Thomas DeWitt Gordon, Grand Rapids Clinic, Grand Rapids

Rockwell G. Kempton, 333 S. Jefferson Ave., Saginaw

Frederick B. Miner, 400 Sherman Bldg., Flint

John P. Parsons, 328 S. Division St., Ann Arbor

Russell Sturgis Rowland, 5140 Second Blvd., Detroit

William S. O'Donnell, 1551 Woodward Ave., Detroit

ANOTHER READER ENJOYS "WEELUM"

The Editor of the Journal of the Michigan State Medical Society.

I am always interested in your Scottish dialect stuff and I am wondering whether you are "Weelum"?

We have a very bright Scotch lady in town, whom we all admire for her many very fine traits, among them her ability to sing "Annie Laurie." I like to save copies of the Journal for her to read these little sketches, and she enjoys them immensely.

Cordially,

F. A. LONG, Editor.

Nebraska State Medical Journal.

Note: "Weelum" is still running at large.

CARCINOMA OF CERVIX UTERI

On the basis of a study of 1,574 cases of carcinoma of the cervix uteri, William P. Healy, New York, concludes that, unfortunately, a cure for this condition has not yet been obtained. Only from 20 to 22 per cent of all patients treated survive five years, regardless of the method of treatment employed. The best results are obtained by early diagnosis, followed by prompt and efficient treatment. Sixty per cent or more of the early cases may be cured for five or more years. Radiation therapy has not yet been stabilized and must be regarded as still in the experimental period. Marked variations in technic and principles of treatment exist in different clinics but, strange to say, the end-results are quite similar. On the whole, in the treatment of cervical cancer, radiation therapy seems to have a greater field of usefulness than surgical treatment and offers more relief from symptoms and greater prolongation of life to a larger number of the patients.—*Journal A. M. A.*

GENERAL NEWS AND ANNOUNCEMENTS

Please note the call for a Special Meeting of the House of Delegates, contained in this issue.

The American Medical Association will hold its 1932 session in New Orleans the week of May 8.

The will of the late Dr. James Cleland, Jr., of Detroit, provides a sum of money for the establishment of a chair in Medicine at the Detroit College of Medicine and Surgery.

Dr. Max Ballin of Detroit has been appointed State Chairman of the American Society for the Control of Cancer in Michigan. Dr. Ballin will represent the Society in Michigan and will work in close coöperation with the Cancer Committee of the Michigan State Medical Society, of which Dr. Dutchess is Chairman.

Under the auspices of the American Roentgen Ray Society a silver plaque in memory of the late Dr. Preston M. Hickey was presented to the University of Michigan on December 10, 1931. The presentation of the plaque was made by Dr. A. W. Crane and accepted on behalf of the University of Michigan by President Alexander Ruthven.

Hurley Hospital, Flint, elected the following Staff Officers: President, C. F. Moll; Vice President, D. R. Wright; Secretary, D. Goodrich. Chiefs of Services: Medicine, W. H. Marshall; Surgery, R. S. Morrish; Emergency, G. G. Curry; Obstetrics, Max Burnell; E. E. N. & T., J. W. Orr; G. U., A. Thompson; Bacteriology, J. C. Benson; Pediatrics, Lafon Jones.

A brief report of the Conference on Child Health and Protection held at Lansing November 9, 10 and 11, will be found in the contribution of Dr. Slemmons under Michigan's Department of Health, in this number of the Journal. The registered attendance at this meeting was 1,136. We expect to print in this Journal during the coming months several of the papers read at this important meeting.

Dr. Ralph Pemberton of Philadelphia addressed the Medical Section of the Wayne County Medical Society on Tuesday evening, December 8, on the subject of The Newer Outlook on Chronic Arthritis. The audience was one of the largest that ever assembled in Detroit to listen to a medical speaker. Dr. Pemberton deplored the fact that more attention had not been paid to chronic arthritis by the medical profession. He showed that arthritic cases outnumbered any other single ailment. A large percentage of these cases would respond to intelligent treatment. He had no specific to offer. The treatment consisted of rest and the intelligent use of massage, heat and light as physical agents; the use of salicylates should be guarded. Vaccines had their place in well selected cases. The paper was dis-

cussed by Dr. Hugo Freund and Dr. F. C. Kidner. Many out of town guests were present.

A large number of doctors from Detroit, Ann Arbor and other places in the State, assembled at the Mendelssohn Theatre at Ann Arbor to witness the ceremonies incident to the presentation of a silver plaque of the late Dr. Preston M. Hickey, former Professor of Roentgenology of the University of Michigan. President Ruthven presided at the meeting. Dr. A. W. Crane, former President of the American Roentgen Ray Society read a splendid address entitled Preston M. Hickey, Pioneer in Roentgenology. Dr. John T. Murphy, Secretary of the American Roentgen Ray Society and President of the Detroit Roentgen Ray Society, made the presentation address. The Bas-Relief was accepted on behalf of the faculty of the medical school by Dr. F. G. Novy, Chairman of the faculty. President Ruthven then made the address of acceptance on behalf of the University. The plaque is a large silver Bas-Relief in profile of the late Dr. Hickey and mounted on a silver background with a black beveled frame.

The eleventh series of Beaumont lectures will be held in the auditorium of the Maccabees Building under the auspices of the Wayne County Medical Society on the evenings of January 25 and 26. The Beaumont lecturer for 1932 is Dr. Howard B. Lewis, Professor of Physiological Chemistry of the University of Michigan Medical School. The general title is The Role of Amino Acids in the Animal Organism with special titles for the individual lectures as follows: (1) Cystinuria and Cystine Calculi, a Surgical and Medical Problem; (2) The Physiology of the Amino Acids. Dr. Lewis is a graduate of Yale University, where he received his B.A. degree in 1908 and his Ph.D. degree in 1913. He has taught in the Medical School of the University of Pennsylvania 1913-15; the University of Illinois 1915-22. Since 1922 he has been at the head of the Department of Physiological Chemistry at the University of Michigan. A cordial invitation is extended to all members of the Michigan State Medical Society to be present at these lectures.

The Michigan Branch of the American Birth Control League held a luncheon-conference meeting at the Statler Hotel, Detroit, December 11. Six hundred people were in attendance. At the luncheon meeting the speakers were Mrs. Walter Bradford Cannon, wife of the well-known physiologist and biologist of Harvard University; Professor Henry Pratt Fairchild, head of the Department of Sociology of New York University; and the Reverend Alfred W. Wishart of Grand Rapids. At the speakers' table, among others, there were the following members of the medical profession: Alexander M. Campbell, M.D., and Harrison S. Collisi, M.D., of Grand Rapids; Thomas B. Cooley, M.D., Lewis Daniels, M.D., George Kamperman, M.D., J. B. Pratt, M.D., of Detroit; Walter Brand, M.D., of Toledo; and Caroline Bartlett Crane, M.D., of Kalamazoo. After the luncheon addresses, a meeting was held for members of the Michigan Branch. Members of the executive board and advisory council as well as members attended. Mrs. Morton Keeney, the state president, outlined plans for the coming year. It was announced that clinics, under the direction of the respective medical staffs of the various hospitals, are being organized as rapidly as conditions permit. Dr. Harrison Collisi of Grand Rapids is chairman of the Clinical Committee. To him

all inquiries pertaining to places where patients may receive treatment are to be addressed. Discussion brought out the sentiment of those responsible for the carrying on of the work that clinics should be conducted in accordance with established practice for clinics of the generally accepted sort.

The following program will be given at the Henry Ford Hospital-Clinic January 29, 1932. The morning program is as follows: Medical Clinics: "Chronic Undulant Fever—A Problem of General Practice," Dr. Frank J. Sladen; "Pulmonary Embolism," Dr. F. Janney Smith; "Spinal Fluid Examinations in an Evaluation of the Problem of Syphilis," Dr. Frank R. Menagh; "The Treatment of General Paresis with Newer Methods," Dr. Thos. J. Heldt; "Diabetic Acidosis as an Emergency," Dr. Daniel P. Foster; "The Diphtheroid Infections of the Blood Stream," Dr. Robert H. Durham; "Jaundiced Patients as a Problem for Differential Diagnosis," Dr. John G. Mateer; "Factors Influencing the Utilization of Artificial Food Mixtures in Infancy," Dr. Joseph A. Johnston.

Surgical Clinics: "General Surgical Clinic," Drs. Roy D. McClure, Clyde I. Allen; "Diagnosis and Treatment of Endometriosis and Carcinoma of the Uterus," Dr. J. P. Pratt; "Intravenous and Retrograde Pyelography—Demonstration of Pyelograms with Case Records," Dr. John K. Ormond; "General Tonsillectomy (Suspension Method), Local Tonsillectomy and Sinus and Mastoid Operations," Dr. Elmer L. Whitney; "Bronchoscopic and Esophagoscopic Clinic," Dr. George C. Kreutz; "Head Injuries Illustrating Serious Complications," Dr. Albert S. Crawford; "Fractures and Amputations," Dr. Carl E. Badgley.

X-ray Clinic: "Tuberculosis of the Spine with Special Reference to Roentgenological Findings," Dr. Howard P. Doub.

Clinical Pathological Conference: Dr. Frank J. Sladen and Dr. Frank W. Hartman. Discussion: "Iodized Salt and Its Influence on the Incidence of All Types of Goiter in Michigan," Dr. Roy D. McClure.

Afternoon Program

Symposium Upon "The Relationship of Nutrition to Clinical Medicine": "Biological Evaluation of Foods," Dr. John R. Murlin, Prof. of Vital Economics, University of Rochester, Rochester, New York; "The Relation of Nutrition to Infection," Dr. P. C. Jeans, Prof. of Pediatrics, University of Iowa, Iowa City, Iowa; "The Significance of Nutrition in Chronic Arthritis," Dr. A. A. Fletcher, Department of Medicine, University of Toronto, Toronto, Ontario; "The Role of Nutrition in the Etiology, Prevention, and Treatment of Dental Disorders," Dr. Milton Theo. Hanke, Department of Chemistry, University of Chicago, Chicago, Illinois.

The following program of the Ypsilanti Good Health Week, January 3 to 8, inclusive, 1932, is of interest.

PROGRAM—YPSILANTI'S GOOD HEALTH WEEK

Open lectures and exhibits arranged by the Public Welfare Division, Ypsilanti Woman's Study Club, assisted by the Washtenaw County Medical Society, and the Ypsilanti School Board.

Time—Evenings, 7:00 to 10:00

Place—Auditorium, Central High School

Sunday, January 3

Special sermons by many of the pastors of our churches showing the relation between health and behavior.

Monday, January 4

SYMPOSIUM—HEALTH BUILDING AND DISEASE CONTROL
Demonstration—Care of a patient in bed—Beyer Hospital Nurses.

Speakers:

Dr. John A. Wessinger—The Cost of Infantile Paralysis.

Dr. M. E. Soller—The Conquest of Infectious Diseases.

Dr. James D. Bruce—The Menace of Chronic Infection.

Dr. David Robb, City Health Officer, presiding.

Tuesday, January 5

VENEREAL DISEASES

Demonstration—Bathing and dressing a baby—University of Michigan Hospital Nurses, under direction of Dr. Haynes.

Lecturer: Dr. R. S. Dixon, Director Department of Social Hygiene, Department of Health, Detroit.
Dr. E. R. George, Ypsilanti, presiding.

Wednesday, January 6

DRUGS, THEIR USE AND ABUSE

Demonstration—First Aid—Boy Scouts of Saline and Pratt.

Lecturer: Dr. Manley J. Capron of Battle Creek Sanitarium.

Dr. Glenadine Snow, Department of Health, M. S. N. C., presiding.

Thursday, January 7

CANCER PREVENTION

Demonstration—Corrective Gymnastics, Miss Lurene Prouse, Instructor Physical Education.
Miss Berenice Ringman, Physiotherapist.

Lecturer: Dr. E. B. Potter of University of Michigan Hospital.

Dr. John Sundwall, Director Division of Hygiene and Public Health, University of Michigan, presiding.

Friday, January 8

MENTAL HYGIENE

Music—Ypsilanti High School Orchestra—Miss Yates, Director.

Lecturer: Dr. George Inch, Superintendent Ypsilanti State Hospital.

Prof. Charles Elliott, Department Special Education, M. S. N. C., presiding.

Round Table Conference—Dr. Louis Schwartz

EXHIBITS

In corridors and first floor rooms, Central High School

Boy and Girl Scout Guides from City

1. *How Good Health is Taught in our Schools*—Miss Mary Hahn, Visiting Associate Professor in Health Service, M. S. N. C.

2. *Foot Hygiene: Proper Shoes*—Miss Lurene Prouse, Instructor in Physical Education, M. S. N. C.

3. *Food Hygiene*—An exhibit of practical menus for the family—Mrs. Charles Elliott, Director Home Economics Department, M. S. N. C.

4. *How the Blood Circulates*—How the pulse beats; a drop of your blood magnified—while you wait—Dr. Jennings Hickman, Miss Irma Sims, Natural Science Department, M. S. N. C.

5. *Dental Hygiene*—Dr. Rickert, University of Michigan; Dr. Leo Whitmire, Ypsilanti.

6. *Bacteriological Exhibit*—Miss Martha Best, Natural Science Department, M. S. N. C.

7. *The Special Education Department* of M. S. N. C. will exhibit as far as possible some of the work of its pupils.

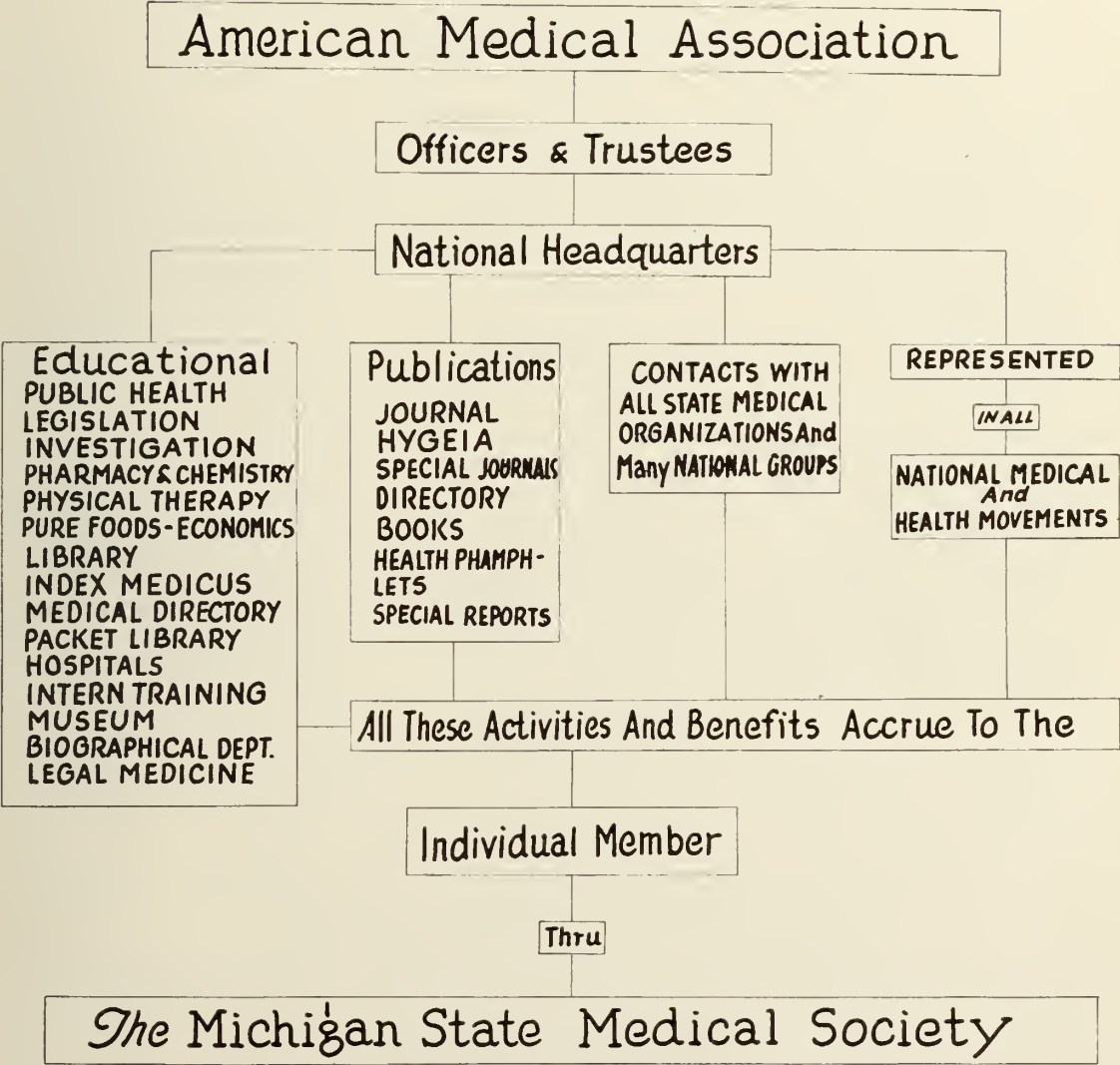
Several other exhibits will be held.

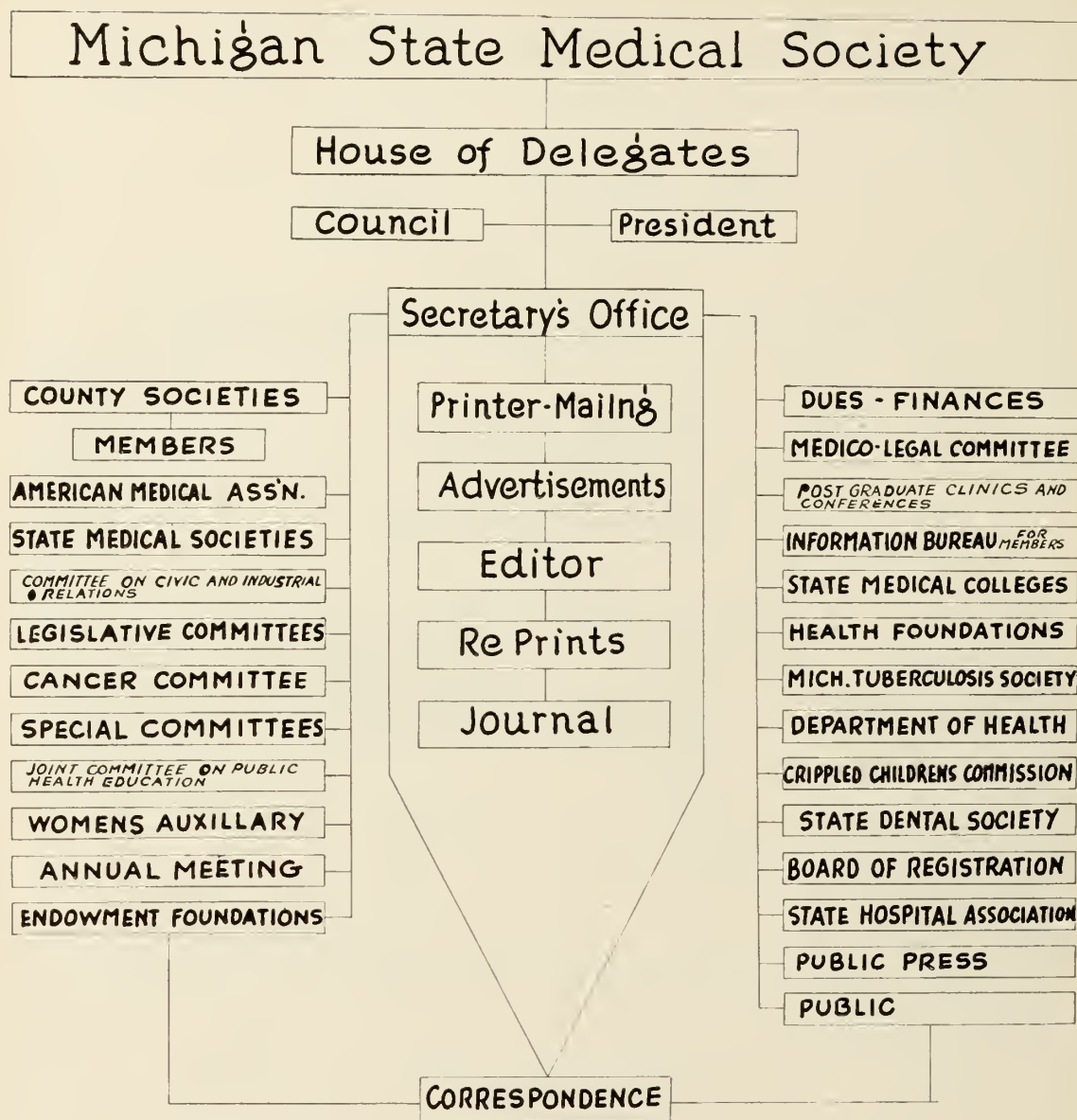
Organizational Activity
of the
Michigan State Medical Society
In behalf of
Its Members

Diagrammatic visualization of the scope and ramifications of these activities. Revealing also some of the services rendered, thereby demonstrating the benefits of membership to the individual doctor.

Membership in a County Medical Society is the greatest and most valuable asset a doctor can have, next to his license to practice.

Maintain your membership and participate in the personal benefits that will accrue to you.





Activities Representation Contacts
Made in Behalf of
The Individual And Composite Membership
of the
Michigan State Medical Society

Michigan State Medical Society

Council

Secretary

Joint Committee On
Public Health Education

COMPOSED OF
REPRESENTATIVES

Health Education

THROUGH

STATE MEDICAL SOCIETY
UNIVERSITY OF MICHIGAN
DEPARTMENT OF HEALTH
STATE DENTAL SOCIETY
STATE NURSES ASSN.
TUBERCULOSIS SOCIETY
RED CROSS
CHARITIES ASSOCIATION
DEPT. OF EDUCATION
HEALTH FOUNDATIONS
HOSPITAL ASSOCIATION
DETROIT COLLEGE of MEDICINE

By

PUBLIC LECTURES
PRESS HEALTH COLUMNS
HIGH SCHOOL LECTURES
POSTER CONTESTS
ESSAY CONTESTS
SCHOOL INSTRUCTION
LAY ORGANIZATION
LECTURES
PRESS INTERVIEWS

UNIVERSITY EXTENSION
BUREAU

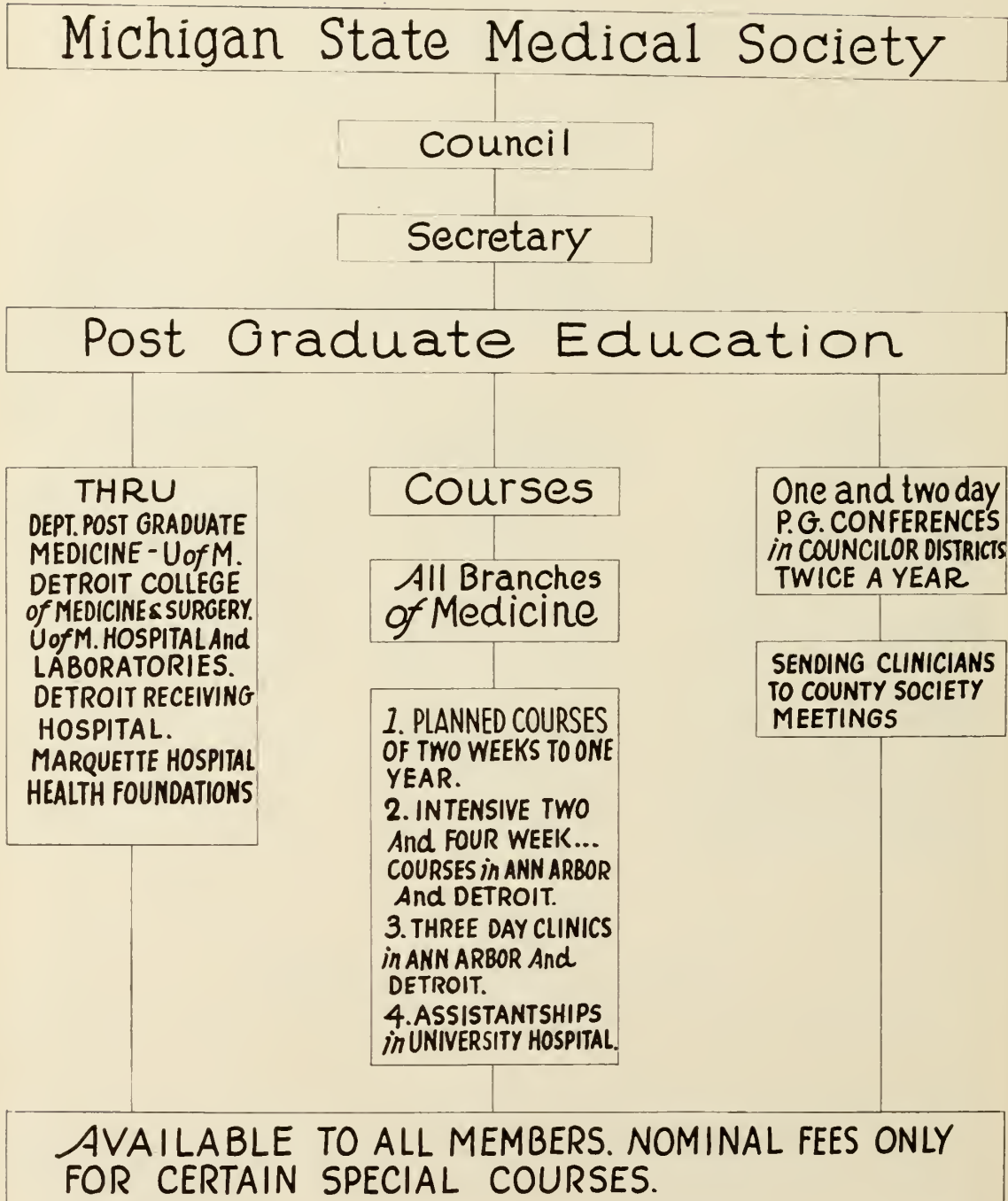
COUNTY MEDICAL And
DENTAL SOCIETIES

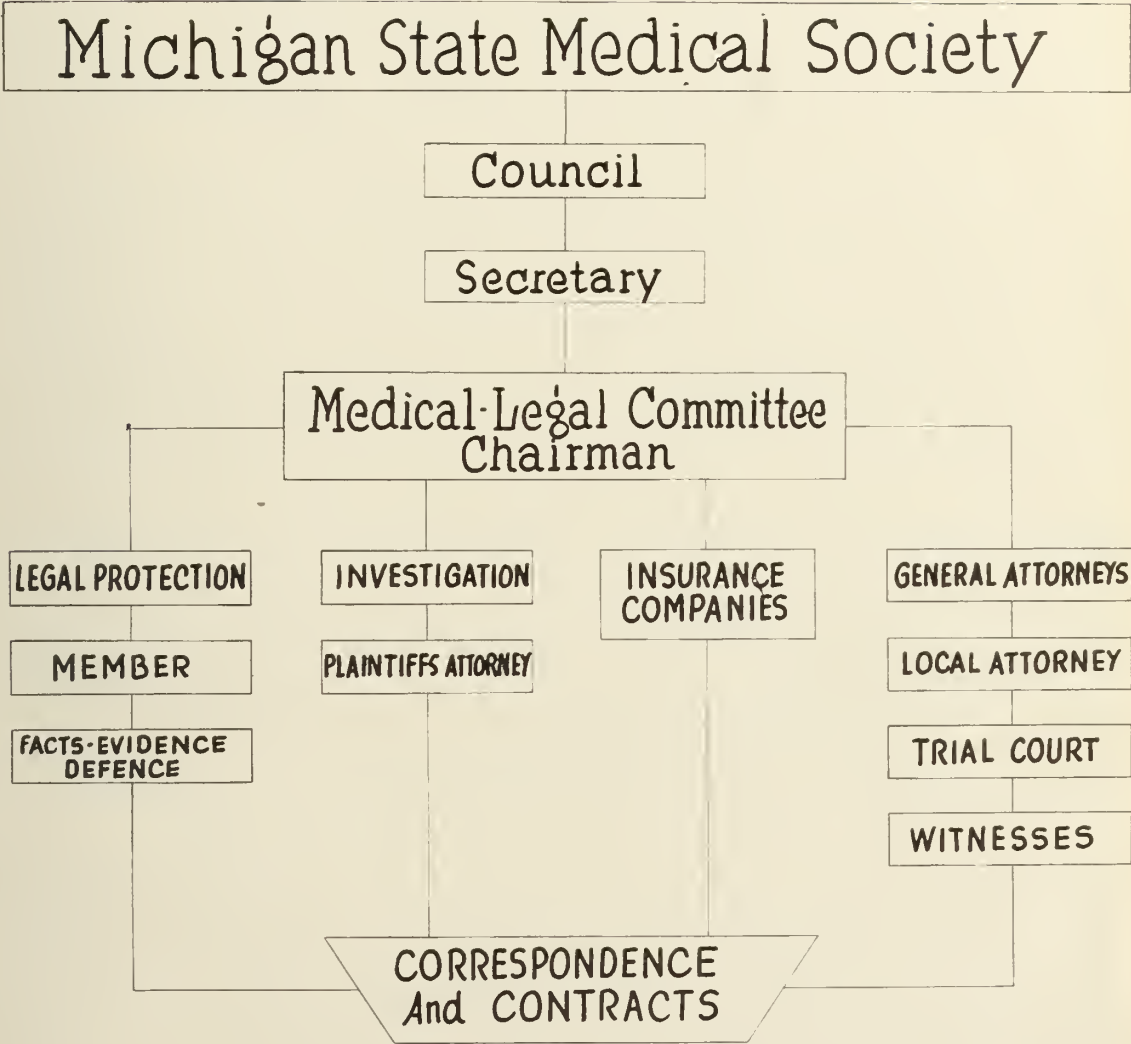
HEALTH ORGANIZATIONS

SCHOOL OFFICIALS

1930 REPORT
LECTURES REACHING 160,000 PEOPLE

JOINT COMMITTEE: The FUNCTION OF The JOINT COMMITTEE IS TO PRESENT TO THE PUBLIC THE FUNDAMENTAL FACTS OF MODERN SCIENTIFIC MEDICINE FOR THE PURPOSE OF BUILDING UP SOUND PUBLIC OPINION RELATIVE TO THE QUESTIONS OF PUBLIC AND PRIVATE HEALTH. IT WILL SEND OUT TEACHERS, NOT ADVOCATES.





Channels And Service Rendered
The
Individual Member

SOCIETY ACTIVITY

OFFICIAL CALL FOR A SPECIAL MEETING OF THE

HOUSE OF DELEGATES—MICHIGAN STATE MEDICAL SOCIETY
To Officers of County Societies—
To Delegates of 1931 Annual Session—
Gentlemen:

A petition for a Special Meeting of the House of Delegates of the Michigan State Medical Society having been received with the requisite number of signatures, as prescribed by our Constitution and By-Laws, please be advised that:

The Council hereby calls a *Special Meeting* of the House of Delegates to convene in the *Hayes Hotel, Jackson, Michigan, at 10:00 A. M. (fast time) on Wednesday, January 27, 1932*, for the purpose of receiving and considering a report from the Special Committee on the Survey of Michigan Health Agencies.

County Societies are urged to arrange for the attendance of their delegates at this important meeting. Every County Society should be represented.

As far as possible the delegates who were elected for the Annual Meeting in September, 1931, should represent your society at this Special Meeting. Where it is found that these delegates are unable to attend, it is authorized that County Societies may elect or appoint new delegates to represent them at this Special Meeting.

Credentials for your delegates have been sent you. Please see that your delegates are supplied with these credentials.

By Direction of the Council.

B. R. CORBUS, *Chairman.*

CARL F. MOLL, *President.*

H. J. PYLE, *Speaker.*

Attest:

F. C. WARNSHUIS, *Secretary.*

SPECIAL MEETING, HOUSE OF DELEGATES

JANUARY 27, 1932

JACKSON, MICHIGAN

Order of Business

10:00 A. M.

1. Call to Order
2. Report of Credentials Committee
3. Roll Call
4. Petition and Reading of the Call for Special Meeting
5. Report of Special Committee on Michigan Health Services
6. Discussion
7. Adjournment

COUNCIL MEETING

Chairman Corbus has directed that the Mid-Winter Meeting of the Council be called for Detroit, at 10:00 A. M. on Friday, January 8, in the Statler Hotel.

F. C. WARNSHUIS, *Secretary.*

If you read nothing else in this issue we urge you to read Dr. H. J. Beel's annual address as president of the Kent County Medical Society. Dr. Beel splendidly sets forth fundamentals that should appeal to every doctor.

PRESIDENT'S ANNUAL ADDRESS

Kent County Medical Society
HORACE J. BEEL, M.D.

For over twenty years I sat in front of the speakers' table at the annual meeting and hoped that the retiring president would either make his address very short, or, better still, pass it up entirely. With that in mind I am going to make mine very short; in fact, after hearing it, some of the more cynical among you may remark that I have almost passed it up entirely.

Two years ago, our retiring president, Dr. Gordon, spoke to you in his usual able manner on the relations of the medical profession to the public. Tonight I am going to say a few words to you on the relations of the physician to his profession as individuals and as a group.

Your first impression will probably be that I am going to talk to you about ethics; and that is as good a starting point as any.

My discussion of this particular subject will be brief, for two reasons. In the first place you all know as much about ethics as I do; in the second place, it isn't going to make much difference what I do say about ethics, but it may not be amiss to discuss a subject which is as basic as this, if we are to keep in harmonious relations with each other.

Turning to that famous volume of Noah Webster for a definition, we find that "ethics is the science of human duty; a particular system of principles and rules concerning duty, whether true or false; rules of practice in respect to a single class of human actions, as medical ethics."

Again—"The science of moral duty; the science of the ideal human character." I like that latter definition—"the science of the ideal human character." It is so unattainable and therefore offers such a splendid alibi, when we unconsciously or otherwise deviate from that excellent but oftentimes unread "Principles of Ethics of the American Medical Association."

Webster's definition need not be so involved: Ethics is summed up in the Golden Rule. It can be expressed in one word, "courtesy." The man who is courteous, considerate and unselfish will seldom offend a brother practitioner even though he has never read the code of ethics.

We who have practiced for twenty years or more have seen a great change in the inter-relations of the medical profession; no

more do we see the consultant who would openly offer to take the case from us, the man who, when he followed us on a case, would sniff at the medicine we had left on the table and then throw it out of the window; the medical man who, asked as to his opinion of a fellow practitioner, would give it in no uncertain terms, even though he had to stick to the truth in doing so. In those days a kindly word from an older practitioner immediately made us suspicious.

Our generation is different; true, our opportunities for belittling our colleagues are no more infrequent, but our methods can be far more subtle. In a city of this size we are well acquainted with the training, professional ability and integrity of most of our fellow physicians. We know their faults and they know ours. It is, indeed, very unusual to hear of a physician telling a layman that his predecessor on a case was an incompetent, a man without training, conscience or morals. He will on the contrary, in most cases, gloss over what he may consider the other man's errors, but may do it in a manner which, at the best, is unconvincing. Remember this: A half-hearted defense of a man or a cause is worse than no defense at all. It tends to leave the impression that the other man is incapable, but that you are too ethical and loyal to say ill of him; and you might much better have come out in the open with a good knock, and let it go at that.

If you will consult your records for a few years back, you will discover that you have had quite a big turnover in patients. Many of yours have not returned to you and many of some other physician's have come to you in their places. You may see in your office today a man who has been treating with another physician—say Dr. Smith (not necessarily Ferris, Richard, Earle or A. B.). This man may be temporarily disgruntled with his previous medical attendant. Here is an opportunity to do the wrong thing, for this man may next week decide to return to Dr. Smith and he will probably tell him what you have had to say about his previous treatment. If you have said what you should say under the circumstances, and have left unsaid what you should not say, you will probably have made a friend instead of an enemy of Dr. Smith (not, necessarily Ferris, Richard, Earle or A. B.).

In every profession there will always be

a small handful of men who have risen so far above their fellows that they do not have to subscribe to any system of ethics which affects the lesser lights in the profession. Our own society, fortunately, is free from men of this type. These men are hopeless and beyond help by admonition, precept or prayer. We can but leave them to time and the Lord, and hope that another crop will not spring up to take their places.

The mere fact that we may consider ourselves better qualified than any one else to treat a case does not excuse us for a breach of ethics. Oftentimes our opinion of ourself is not concurred in by our confrères, and in some cases even is not substantiated by our results.

We might at this point say something about consultants and their relations to those of us who employ them. Most consultants are specialists, and I for one do not agree with the man who said, "A specialist is one who knows more and more about less and less." The specialist might retaliate by reversing it and saying that a general practitioner is "One who knows less and less about more and more." The specialist and the general practitioner should always be in complete harmony, especially when you remember that a specialist is only a general practitioner who has gotten tired of making night calls.

I believe that we do not make use of consultation as frequently as we should, many of us possibly fearing that the patient may think that by suggesting a consultant we are admitting our inability to carry the case through to a successful conclusion. I believe that in many instances we lose the confidence of our patient by not asking for consultation. It is much better to have the request come from us, rather than from the patient or his relatives, for in the former case we can usually choose our own consultant. The old custom of stepping out into the kitchen and closing the door after the examination should be a thing of the past. Most consultations can be held, if not in the sickroom, at least in the presence of the family. Such a consultation, if conducted with an ordinary amount of tact, tends to engender confidence in the ability and honesty of the medical attendants, while the consultation held behind closed doors tends only in many cases to arouse distrust and suspicion.

I must admit that it makes one shrink a

little when, at the close of the consultation, the consultant says, "Twenty-five dollars," for telling the family something that we have already told them for three dollars. But remember, it is largely up to the consultant to determine whether we continue to collect the three dollars.

Departing for a moment from the original purpose of this paper, I would say something about our interest in public affairs and our participation in them. For years the medical profession lived in isolation as far as matters of public or community interest were concerned, unless they directly affected the profession itself. Even today our interest in pending legislation is confined to more or less frenzied attempts to sidetrack legislation which would interfere with our present medical practice act, or give greater recognition to competing schools of practice. I do not have in mind any attempt on our part as a group to mix in politics. Such a procedure, even if desirable, would be out of the question as long as the medical profession in Grand Rapids continues to be the mecca for southern democrats. Our political connections should continue to be a matter of our individual consciences and our reaction to the 18th Amendment.

I did have in mind, however, a greater participation in matters affecting our own community. We have in times past given the impression that we were too busy practicing medicine to give any time to community matters. There is no reason why this should be so. Anything which affects the welfare and prosperity of our city affects us as much as it does any class of people. We should have representation on the welfare groups—the association of commerce, the governing boards of the hospitals. Such recognition will come only if we show the public that we are interested in community needs and demand such recognition.

Individually and as a group, we can, if we but will, exercise a tremendous influence for good or evil. In spite of its apparent leaning at times toward other systems of practice, the public in general still looks up to the medical profession as a class of men above the average in training and education. Our endorsement is eagerly sought, even by leaders in the Society for Birth Control and by the manufacturers of cigarettes. As a society we should be guarded in our approval or disapproval of existing move-

ments, realizing that hasty judgment in such matters may be the occasion for much chagrin and regret at a later time. And here I would call to your attention the fact that the policies of this society are determined in open meetings, and by a majority of the members present. When only forty or fifty men attend a meeting, the entire membership can be obligated by their action. This should not be so, but this condition will continue to exist as long as a large majority of the members persist in remaining away from the meetings.

The subject of advertising is one which, in the interest of harmony, should probably be touched on very lightly. Publicity differs from advertising only in the spelling. Publicity of the proper kind, publicity which is put forward by the profession as a group, and which tends to acquaint the public with our aims and ideals and promote a better understanding, is ethical and advisable. Any publicity by the physician as an individual is questionable. The benefits derived under such circumstances are oftentimes not commensurate with the ill will occasioned among our fellow practitioners. Our best advertising will come from satisfied patients—people who appreciate conscientious effort and who come to believe in our ability and honesty.

It is a question whether frequent mention in the society columns of the newspapers will do much toward building a practice. If the public sees that Dr. Whoosis is frequently out of town, the public may decide that Dr. Whoosis might better be sticking around and attending to business.

And now I would talk to you about our local society and our obligations to it. Not that this is a new subject, but it will bear frequent repetition. No business, no profession, in fact nothing of any consequence, has ever advanced without organization; and no organization can long succeed without the loyalty and coöperation of its members.

In ancient times men of like pursuits were banded together into guilds. A man to belong to his guild had to possess certain attributes of knowledge and skill, which made him eligible to membership. He was proud of his guild and jealous of its good name. Our society should be our guild, our brotherhood, our fraternity, something more than just a medical trade-union. It is the smallest but most important unit in the

whole system of medical organization, which includes county, state, and national societies. We might if absolutely necessary get along without some of our national societies, even the American College of Surgeons and the American College of Physicians, but take away the county society and the whole structure would collapse.

The man entering practice usually affiliates himself with the local society. Membership gives him a certain standing in the profession, and conveys certain benefits such as eligibility to membership in national societies and appointment on hospital staffs. Without these, of course, he cannot gain the success which was emphasized as the real goal in life by his more or less altruistic professors in school. Howbeit, a certain amount of altruism has been knocked out of him by his internship and the realization that pure altruism did not pay for the Pierce-Arrows and Packards, or even the Hudsons.

If he is to be content with membership on terms of what he can get out of mere membership, he will not make a good society member—and here is where you older members can exercise an influence for either good or evil. If the younger man sees that, in spite of a half-hearted interest in the activities of your society, you are apparently successful, he is going to wonder if after all there is anything to it beyond attending an occasional meeting and paying the dues. The stimulus to become active in the society will be lost.

In a medical society, as in everything else, it is so easy to "let George do it." In every organization there a number of "Georges," men with a high sense of duty who uncomplainingly shoulder the brunt of the work. This is evident at times even in our own society—it is evidenced by the attendance records—a certain group of men who seldom fail to attend a meeting, even if there is nothing in the scientific program which could possibly benefit them in their own particular branch of medicine. And here I pause to pay my respects to that handful of men who are such loyal attendants at all of our meetings, regardless of the scientific program, the weather, or the boxing-matches at the armory.

Why is our average attendance so poor? Is it due to a lack of interesting programs? We have tried to diversify them, but you

must remember that in a society of the size of this, with a fairly large representation of all the specialties, we cannot at every meeting offer something to fit every man's particular needs. If we limit our attendance to those meetings from which we expect to obtain something of special interest to ourselves individually, our attendance record will continue to be below what it should be.

I realize that a number of the members have evening hours on Wednesday night, but a change of evenings would but serve to inconvenience an equally large number who have office hours on other evenings of the week. However, even this does not offer an absolute alibi. It is oftentimes possible to attend at least part of the meeting and thus show your interest in the society.

Is it due to too great pressure of work? Not, I believe, in the last year.

Is it due to an unsuitable meeting place? In the last few years we have met in a number of different places, hoping with each change that a greater interest in the meetings would manifest itself, but usually with disappointing results. There has been a growing conviction that a society with as large a membership as ours should have a home of its own; and with that in mind we have this year started out on a modest scale to procure such a home—the rooms which the society has leased in the Medical Arts Building, and which we hope to furnish in a suitable manner with your earnest coöperation and financial support. Your Library Committee is planning something which will be worthy of you as the second largest society in Michigan; something which as a beginning should stimulate you to outgrow it, and eventually necessitate even larger quarters. It is, of course, going to mean some increased financial responsibility, but if it will serve to increase interest in our society, to stimulate a greater pride in being a member of Kent County, it will be worth whatever small sacrifice is necessary to carry it through to a successful conclusion.

One minor cause of non-attendance should be mentioned. It is a condition which might be called "Past-presidentitis" and affects only a small group, the chief symptom being a disposition to cease regular attendance after the expiration of office.

Another excuse that has been advanced is the multiplicity of meetings of a medical nature: Kent County, the staff meetings of the various hospitals, and meetings spon-

sored by private groups. Surely the sessions of our medical society are not too frequent, our regular meetings not exceeding sixteen a year. If we are called upon to donate too much time to such gatherings, the outside interests, and not the local medical society, should be the ones to curtail. Your primary loyalty is not to your hospital or your group—it is to your County Society.

There is sometimes a tendency as we advance in years to lose somewhat our interest in our meetings, except for the occasional program which may offer something of particular benefit to us. This, I believe, is something which should be guarded against. Our Society needs us, and we need our Society just as long as we are in active practice, even though we have attained those heights in the profession which allow us to sign in on the hospital register with initials only, or park our car on the hospital driveway.

One thing which has done a great deal to promote a better feeling in the profession is an increase in the opportunities to meet each other socially. This has been brought about, among other things, by the instituting of the Annual Picnic and the Annual Golf Tournament. Here also is where the dinner meetings of the Society play a big part. Contact at the dinner table with a fellow practitioner whom you may know but slightly may aid you in evaluating him properly. You may have formed a hasty and incorrect opinion of him from casual observation or hearsay; and you may be agreeably surprised when you come to know him better, and may decide that after all he is really worthwhile; unless, of course, he happens to be a noisy soup-eater, in which case the rules are suspended and the sky is the limit.

Our social contacts will often do more to promoting good will and coöperation than our professional contacts. I believe there should be more social features in our organization. Previous executives have advocated the establishment of a woman's auxiliary, although nothing apparently has ever been done about it. I would recommend it to the society for consideration during the coming year.

While admonitions are still in order, I might suggest that members attending the meetings make an effort to be on time. We cannot start the business program until we have a quorum present, a quorum, as defined

by our By-Laws, consisting of thirty members. Delay in opening the meetings serves to dampen enthusiasm and makes the president nervous and sometimes irritable. If we can start on time, we can, of course, close our meetings earlier, and this will obviate the necessity for some men leaving just before the discussion starts; a habit which at times amounts almost to discourtesy to the discussants who have in some instances gone to considerable trouble to prepare their talks. The general exodus before the end of some of our meetings looks like the fourth quarter of a one-sided football game.

I have faith in the future of our society, and a feeling that our best years are ahead of us. I believe in the honesty and sincerity of the great majority of the men practicing medicine today, and I believe our lapses are largely due to thoughtlessness rather than premeditation. I would again urge on you a greater loyalty to your profession and its institutions. The years to come may prove the necessity for such increased loyalty, and more closely knit ties between us individually. Our greatest dangers to continued prosperity and advancement will arise, I believe, not from outside forces, but from within—a lessening of the sense of what we owe to the profession which gives us a livelihood, a profession which has commanded the respect of the people we serve, and which will continue to command that respect only as long as we show them that we ourselves respect it and believe in it.

In closing, I wish to assure you of my appreciation of the honor you did me a year ago in making me your president. My term of office has been very pleasant. I have had the greatest coöperation from the committees and from you as individuals. I only hope you will be as kind to my successor.

Thank you.

ETIOLOGY OF INFLUENZA: TRANSMISSION EXPERIMENTS IN CHIMPANZEES

Perrin H. Long, Eleanor A. Bliss and Harriet M. Carpenter, Baltimore, transmitted disorders characterized by fever, prostration and a leukopenia to three chimpanzees by intranasal inoculation with bacteria-free filtrates of rhinopharyngeal washings obtained from individuals ill with human influenza. A similar condition was produced in an ape during a nonepidemic period by means of an intranasal inoculation with unfiltered influenzal material which had been preserved in the icebox 123 days. The difficulty of interpreting with complete satisfaction the observations made on the apes is obvious, and the authors therefore present the observed facts with the knowledge that they conform with those previously reported in man by other investigators. —*Journal A. M. A.*

CLINICS AND SOCIAL PROBLEMS THAT THREATEN OUR PROFESSIONAL ENTITY

CHARLES J. WHALEN, M.D., LL.B.
CHICAGO, ILLINOIS

(Editor Illinois Medical Journal)

The medical profession, long overly sanguine or utterly indifferent, is awakening to the fact that neither its own nor any other groups will emerge unscathed from the current world-wide economic war. Further, that immediate self-protective action is demanded, which must come primarily from powerful medical organization, and a readjustment of medical economics, both in and out of the profession.

Of all the degraded outcasts dropped on the doorsteps of the nations by the World War, the worst and lustiest is *Communism* in the most highly developed state that civilization has ever seen this unfortunate monster. So highly developed, in fact, that its inherent malice masquerades as mercy.

Miasma of its breath penetrates every stratum of society, with insidious fatality. Its heart is destruction; its soul, chaos. Against it the one specific is the substitution of that natural humanitarian coöperation that is the legal offspring of progress and education. Such coöperation does not destroy the acumen of competitive schemes of living, but walks with it hand in hand, and aims at an equalization of burdens, rather than a partisan shift. Socialistic demands are always for a shift—to the other man's shoulders.

For a quarter of a century I have been prophesying just such socialistic scourges as now envenom the entire structure of medical practice and which, unless checked, will ravage beyond repair the scientific efficiency of the profession. There is, it would seem, but one chance for ultimate survival of the most necessary material science required by man—that chance is sincere, concerted and organized defensive effort, for medicine, with medicine and by medicine as a skilled and able body.

Aptest expression of such procedure must be directed against all lay encroachments upon the practice of medicine and must enforce the insistence that all medical practice and the medical profession shall be controlled by competent licensed medical men. Medicine must be practiced by physicians. Control of this vital science should

never for a single hour be held by any local, city, county or national government; nor any corporation nor foundation; nor lay endowed, nor tax-supported institution or group; nor by any individual, nor group of individuals other than duly licensed, ethical, skilled physicians working under a board of medical safety such as only the profession itself can supply. Medicine is the most exact of sciences, the most dangerously vital of professions. Its domination, regulation and guidance should no more be taken out of the realm of its own members and put into the hands of the unversed and unskilled laity than should the piloting of a passenger airplane be placed in the hands of some chance tourist who is of the idea that he can do a better job than the trained, licensed man at the controls.

Yet an exactly analogous situation confronts us today in the practice of medicine. Hot-bed of all the present trouble had origin in the early well-intentioned, once exigent clinic or free dispensary aimed to aid the destitute. Begun in medieval times as a way-station of good samaritanism, when physicians were few and medical knowledge less, and often carried on as a religious penance, the clinic grown perverted has spread with all the malignancy and rapidity of the bubonic plague. In the clinic today the ambitious philanthropist, the bureaucrat striving for political supremacy, and the demagogue without his demagoguery, sniff the red blood of authority and howl for more. Medicine through the centuries has existed as a semi-mystic, tantalizingly elusive land to the man unlettered in its walks of wisdom. In the clinic, abetting in the subsidization of the tangible foundation from which medicine must work, there has developed the first lesion through which socialism has contacted its pernicious infection with the practice of medicine; which, in its turn, is being used as a catspaw for launching lethal measures at the most enduringly democratic, and genuinely fraternal system of government the world has known. Such statements are neither rabid, extravagant nor fantastic. Medical men are credulous with their fellowmen, and from this credulity has arisen the laissez-faire attitude that has brought our professional entity to very sad straits. Future prospects appear even worse. Ethical medicine is far from free from errors, but its errors against its fellowman are far less than are its errors

against itself. The doctor has always despised economics for science' sake. He has served without thought of reward and now observes his very field of service about to be taken from him by those who seek the reward and insist the other fellow shall give the service.

Is there, I ask, any other business or profession in the country where at least forty per cent of the service rendered is for charity? And at least another forty per cent marked "Uncollectible"?

Is there any other branch of human endeavor where, after an investment of the first twenty-five years of his life—to make a minimum estimate—and from \$10,000 to \$30,000 of capital, a man finds himself in a profession where, according to the National Committee on Medical Costs, the average income of almost 5,000 men is found to be around \$1.50 per hour?

Is there any other business or profession where so many of its activities are interfered with and dictated to by the laity? Not by scientists but by business men?

True, it might be a most excellent thing if science would take a leaf out of the book of commerce. If this occurred I am very sure that the very first law the physicians of the country would cause to be passed would be a drastic statute insisting that the non-scientist should mind his own affairs. And also the very first offender to be arraigned under the statute, I am sure, would be the clinic or "Free dispensary." There is where the poison breeds that has loosed the whole tribe of socialistic enterprises upon an unsuspecting country. In these present day dispensaries the initial *raison d'être* is long since relegated to the limbo of non-necessity. Time was when dispensaries were useful for securing clinic material for teaching purposes and for medical colleges. They were, too, a seat of mercy for the very poor, rather than bargain centers for those able to pay for care. But not so the present day dispensary. Such organizations are now promulgated by every variety of lay group, from churches and fraternal orders to industrial and commercial concerns as a means of public attention. Individuals and groups of individuals set out dispensaries and control them to the everlasting confusion of medical fitness and efficiency.

A nation's health is its power. This truth no politician disregards. Perhaps the worst

feature of the present medical chaos is the political exploitation of suffering humanity through the determined intention to put the practice of medicine under the lay control of all branches of government from Washington down to the village fathers of outlying hamlets. Such control means jobs for ward workers and appropriations from tax-payers' pockets. The doctors may give "Honorary Service."

HOW THE MAINTENANCE OF OUR PROFESSIONAL ENTITY IS IN LINE WITH THE FUTURE OF MEDICINE

The future of medicine can be considered only as a vital element in the future of civilization. These two are linked even more indissolubly than are civilization and economics. To survive, a race must be kept fit. Administration of this responsibility must continue to rest in the hands of a selected group, especially trained and skilled for such duties, as it has done throughout the centuries from primitive times. It cannot be allowed to be a cog in a great overcentralization scheme.

While ever at the forefront in the paths of science, the medical profession has played the laggard from the viewpoint of economics and its own balanced relationship with regard to the shift in human values that is gradually striving to make life less competitive and more co-operative,—though for permanency, not communistic. Failure to maintain this equilibrium with the economic, educational, commercial and revolutionary transitions of life and the years leave the medical profession in its present debatable position.

Immersed in the profession and practice of medicine with all its sacred duties and ideals, the glory of the vision has blinded the rigors of the path, its perils and its pitfalls.

Consequently medicine finds itself today confronted with:

(1) Threatened government control with all the ramifications of politics, lay dictation and hampering bureaucratic red tape, and complete scientific failure.

(2) Usurpation of medical practice by lay endowed or tax supported or otherwise financially aided institutions in which the scientific practitioner is no longer a free agent but a subdued and subsidized subordinate.

(3) Almost complete annihilation of

that indispensable ingredient in the public health and welfare, the general practitioner.

(4) A shamelessly shameful misrepresentation before the public it serves

(5) Practical deprivation of the same professional rights as are demanded by any expert mechanic, merchant or agricultural worker.

(6) An average rate of payment for services rendered that is greatly below that enjoyed by the bulk of the United States citizenry.

I repeat that the greatest cause for the dissolution of the defense of medical inheritencies lies in the lack of concerted protective action or professional organization on the part of physicians. Another lies in the individual isolation of the average doctor, a natural result of such professional exigencies as continual self-sacrifice and individual humanitarianism. Resulting from this professional incoherency is the unprotested entrance into the fields of medical administration of groups of lay dictators, well-intentioned, but misguided philanthropists and what is really ignorant and absolutely formidable anti-medical legislation. For these activities the ubiquitous clinic is the weapon with a silencer.

Out of the heterogenous mass comprising today's nonscientific yet equally vital medical perplexities, emanate genuine problems to which the doctors must make speedy answer. These solutions can be found only in the profession, though perhaps expert outside counsel and advice might not be amiss. Medical economics have been too long neglected.

The medical profession can be trusted to find the way out with as much certitude as it has found the means of suppressing the ravages of yellow fever, of typhoid and of smallpox. Brought to the realization of affairs, undoubtedly the profession must set about finding how to exterminate:

(1) Hospitals entering into the practice of medicine, either on full or part pay basis, and with the aid of the clinic.

(2) Universities competing with their own graduates in medical practice, and helped out by the clinic.

(3) Lay conducted enterprises and corporations generally taking over medical practice and always with a clinic.

(4) Installation of such group medical practice under state control such as is making a farce of medical practice in foreign,

non-democratic countries, whether under the working label of panel system, state health insurance or other like cliques and beginning with a clinic.

(5) The rapidly growing socialization—but not coöperation—of all forms of medical practice that starts out with a clinic.

(6) Unequal distribution of expert medical service in point of area and population that effects an oversupply of physicians in cities and a dearth of ethical men in sparsely settled districts and now sopped up by a lay "clinic."

(7) Staggering cost and length of medical education. This condition demands a practical revision of present medical education with a consequent reduction in cost and length of preparation without diminution of efficiency, and an upset in the clinic system, as abused today.

(8) Unscientific and lay engendered legislation that diverts public moneys into unscientific channels for disbursement in the guise of public health betterment as well as allied legislation that actually hampers or restrains scientific practice of medicine and always produces a clinic at every step and usually under lay dictation.

(9) Control of public health and sanitation whether supported by public or private money by any agencies other than those of a duly qualified medical group and invariably exploited by a clinic.

(10) Abrogated incomes of medical men, much of which deficiency is caused by the negligence or indifference of a large group of citizens who seem to think that only the very rich should ever pay a doctor and that everybody else should have the most expert care at a clinic.

(11) Dissemination of the idea that medical service, like good roads, is a state beneficence and should be passed out at a clinic.

(12) Falsely inspired fallacious statements in the lay press of existing conditions in the medical profession in point of achievement and of practice and minimizing the individual doctor while maximizing the clinic.

In line with these contentions it is interesting to note that:

Since the promotion and preservation of health is the responsibility and obligation of medicine, glaring faults in medical structure should be corrected by the profession rather than by the laity. The doctor can make a

better diagnosis of the seat of disturbance of balance than any non-professional.

The coöperative movement in social structure cannot be denied nor evaded and must be met in some fashion that is at once sane and scientific by the medical profession as much for its own sake as for that of public welfare.

Some economic level must be established between medical service and those medicine serves. Nor can this level be built successfully upon a communistic, nor a socialized state controlled system of medical practice with sublimation of the laity and subordination of the physician. For example—England admits the failure of the panel system. From France comes the comment, "The government officials in public praise the system in vague terms and in private admit its futility and danger."

Morbidity and mortality rates in Switzerland tell the tale of state medicine in the Republic of Switzerland.

The Krankenkassen experience in Germany evidences that the German health program today is fat-feeding for political spoilers and bureaucracy but that public health benefits are at a minimum by comparison.

As to social insurance in Denmark, why,—
"Denmark declared that social insurance constitutes one of the most powerful means of depravation ever invented. Denmark abolished the system of health insurance and returned to the status quo ante as infinitely the preferable condition."

Russia will have no private control of anything. Russia seems not to be making strides in either medical efficiency or public health records.

Workings of health insurance in foreign countries are not applicable to the United States, where the system of living is on a higher scale and far more luxurious standard for the middle and lower classes than in any other country in the world, or in history. We should discard, not copy, errors of judgment made in foreign lands.

The National Committee on Medical costs found that fees of physicians and surgeons comprise but from 26 to 30 per cent of the whole cost of illness. The laity allied with medicine gets the bulk of profit.

That the Cornell Clinic and the Baker Memorial hospital are but two instances of philanthropic organizations maintaining clinic and hospital service for those of moderate means. The Baker Memorial Hos-

pital has a maximum total medical or surgical fee of \$150. The Julius Rosenwald fund has underwritten one-half of the Baker Memorial deficit to the amount of \$150,000 with the stipulation that not more than \$75,000 shall be paid within any one year. Is anybody underwriting the individual doctor?

The medical profession should be brought to book for its errors in economics, but brought to book by itself. Civil courts allow a man trial "by a jury of his peers." Medicine has the right to demand the same justice.

If the clinic has become the curse of modern medical practice, debauched as it is by lay dictation and interference, medical organization at least can function free from this taint, and deliver the profession from the land of bondage.

Effective coöperation can be had only by effective organization. Effective organization requires on the part of each individual practitioner a realization of personal responsibility, a personal interest in this responsibility and active as well as projected effort. For years now politics has been controlling medicine. Let medicine give politics a dose of its own medicine. What a howl went up a few weeks ago when it was intimated that the United States Congress was about to enact new banking laws. Finance wouldn't stand for it. Why does medicine? More congressmen are fitted to practice finance than they are medicine. Yet look at what congress did to medicine and is still doing.

We need a mass movement in politics and economics and an individual movement in our own ranks. The old fashioned family doctor was one of the greatest powers in the upbuilding of the United States. He was a community power and benefactor. Bring him back.

The rise and fall of the general practitioner is in direct ratio to the increase of socialization in medicine. Reinstatement of this almost lost species of medical man might be the bridge over which the rational forces can pass to a resumption of medical independence.

For nearly thirty years now the general practitioner has been pushed aside by the ranks of specialists. The lure of specializing is great but how about its need? It is easier to specialize in a certain ailment, to keep regular hours, to do only that part of

medical practice that appeals most to a man. But is that right and just? I do not believe that every man who sets up as a specialist is as gifted in that direction as he thinks he is. Specialists are in a measure born, not educated. When it comes to the present surpluseage of specialists and shortage of general men, there is something wrong.

Medical men themselves should discover what it is, right it themselves and lose no time in asserting their own position in national economics as well as that of the mother science. But nothing of enduring value can arise except from a concerted, determined, organized declaration and defense of these principles. Medical economics are out of joint.

WHY A POST-GRADUATE COURSE?

TOM BENTLEY THROCKMORTON, M.D.†
DES MOINES, IOWA

Scientific medicine and medical education have made tremendous strides in their respective fields during the past fifty years. From the time when one without preparation, except possibly native ability, could hang out one's shingle and thereby announce to the world that he was a doctor, to the present extreme when a full high school training with pre-medical requirements is essential as a preliminary step to the study of medicine, many changes for the betterment have naturally taken place. The young man who is fortunate enough to matriculate in a standardized medical college of today at least has had some preparation in the arts and sciences that should enable him to better understand the study of the human body in its relationship to health and disease.

With matriculation in the medical college comes the beginning of a grinding four years of intensive study and training. Professors, with seeming unrelentlessness, are insistent on driving home to the embryonic medico their views on the particular branch of medicine which their chair represents. No matter if there be divergent opinions between the occupants of the chairs of medicine and surgery, the student must accept the diametric teachings in order to pass in these respective branches. During the course of his medical education, disease and its inroads on the human economy is con-

†Dr. Throckmorton was Secretary of the Iowa State Medical Society for many years.

stantly being presented in laboratory work, in clinical instruction, and in didactic lectures. It is true that histological slides are reviewed as a foundation for the far more extensive course in the study of pathological anatomy. It is pathology and its resultant organic changes that are so greatly stressed; it is disease in its varying manifestations, not health, that is demonstrated clinically.

With the completion of the four years' training, with their attendant cramming for final examinations, and later the State Board or National Board examinations still to pass, is it any wonder that the young man with his newly acquired Doctor of Medicine degree begins to wonder what it is all about? Then follows one to two or more years of internship in a recognized standardized hospital. Here, perhaps, for the first time the young physician begins to realize that all sick people are not necessarily afflicted with organic disease. He is slowly brought to the realization that many complaints, which according to his teachings should possess a background of organic change, are without demonstrable physical findings. In other words, his eyes are opened to the fact that functional changes may simulate organic disease and that the mind plays an extremely important rôle in the attitude with which the sick person views his illness, be it real or imaginary.

Having at last completed all the requirements, both of college and state, we find that twelve years, or their equivalent, have been used in preparation to enter a college where the premedical requirements of some standardized medical school can be completed. Here, too, three, or possibly four years are used in satisfying these requirements. Then follow four years in a medical college, supplemented by one or more years as a resident physician in a hospital. Having completed all of this exacting training the physician now finds himself on the threshold of the beginning of the practice of medicine. Is this the opportune time to talk of post-graduate study? The answer is too obvious to state. By all means, the young physician now needs actual experience in the field of general medicine far more than he needs anything else. He should spend ample time on his patients and some years in the practice of medicine before he thinks of other accomplishments. Of course, it goes without saying, he should align himself with organized medicine and as quickly as possi-

ble become affiliated with his county, state, and national societies; all of which he should attend as regularly as possible and take an active part in their proceedings. If his training has been such as to cause him to lean towards one of the specialties of medicine he may, with benefit, join some of the societies which pay special attention to that specialty which interests him. He should, however, work with one aim in mind, that of gaining a knowledge of medicine and surgery as is related to, and comes only from, an understanding acquired by long hours of hard work in the general practice of his profession.

With such a foundation securely laid the medical man is now ready to harken to the call of post-graduate study. He can enter upon his studies with a zest not heretofore experienced. A much needed rest from arduous duties, both day and night, allows an accumulation of physical energy which in turn whets his interest in medical and surgical problems to the keenest edge. He now begins to see sickness and disease in a newer light. His contact with bedside work and clinical demonstrations are no longer academic. His studies no longer represent something to be repeated to the quiz master. They represent that broader and higher plane, something that is practicable and will make him a better doctor, something that will enable him to return to his community and render increased service to his fellow-man.

Post-graduate study stands out in a peculiar relationship to the practice of medicine. If taken too soon after graduation, and not consistently followed up, it offers but little as a benefactor; if taken too late after graduation, it again loses much of its value. As the poet has well said, "There is a tide in the destiny of men which, taken at the flood, leads on to success." So is it true with post-graduate study; it should be taken at the right time to obtain the greatest benefit. No one can specify just when this time should be. Usually a few years of general practice will bring about a desire on the part of the ambitious practitioner to go to some center of medical learning and there acquire the knowledge he seeks concerning perplexing problems already encountered at the bedside, thus enabling him to cast aside old ideas for newer and better ones, and to receive new inspiration by learning first hand of those things which have entered the

field of medicine since he became a member of the profession. A successful vaccination against smallpox usually renders a person immune for life against that disease. Conversely, it can be stated that one successful post-graduate course does not render the physician immune against the necessity for further study, but the inoculation seems to bring about an innate desire to go, at more or less regular intervals, to places where medical and surgical information can be obtained of the highest grade. Thus we find that many physicians habitually haunt the great centers of medical learning and find themselves amply repaid for both time and money spent in furthering their knowledge concerning the human body in health and disease. Why a post-graduate course? Just scan over the list of successful colleagues in your community—in your acquaintance-ship—and I feel the answer will be forthcoming.

PRESIDENT'S MONTHLY MESSAGE

Most of us feel that there is but little which we, as individuals, can do towards adjusting the multitude of complex problems baffling our professional leaders today. Many of us, with a false sense of security, have an abiding faith that there is nothing which can in any way interfere with the ultimate manifest destiny of the greatness of the American Medical Profession. Many of us believe that there is no cause for concern or worry, that at the worst it is but a temporary squall, and that the skies will soon be blue again. There are others who are confused, have lost their sense of perspective, can see nothing but abysmal failure in all our efforts to promote the welfare of our profession. All of us are in a measure wrong. There is a real cause for alarm, but there is also a way of overcoming and surmounting our difficulties. It is well directed team work, made possible only by each one of us as an individual doing his bit. The public looks to us for guidance and advice in all matters pertaining to its health. Let us not give them cause to lose confidence in us, but let us make the most of this great opportunity by giving our officers our whole hearted support and coöperation.

“It is not the individual
Or the army as a whole
But the everlasting team work
Of every bloomin’ soul”
CARL F. MOLL.

HONORING REGENT R. R. SMITH

On January 14, at the Pantlind Hotel, Grand Rapids, at 6:30 P. M., the Fifth Councilor District by direction of the Council of the Michigan State Medical Society will tender a dinner, honoring Dr. Richard R. Smith, recently appointed Regent of the University of Michigan.

A cordial invitation is extended to the members of the profession throughout the state to join in this function. Reservation requests should be sent to the state secretary.

Following the dinner responses will be made by: President Ruthven of the University; Dr. W. H. Marshall, Flint; Dr. J. Milton Robb, Detroit; Dr. Carl F. Moll, Flint; Dr. R. H. Denham, Grand Rapids; and Dr. Smith. Dr. Corbus, Councilor of the District, will be toastmaster.

ANNUAL DUES

County and state dues are now payable. Your membership is a most valuable asset. It is a protection no doctor can afford to forego. To remain in good standing it is necessary that you pay your dues promptly to your county secretary. Remit them today.

By reason of the depression, credit for 1931 dues was extended to December 15, 1931. Those in arrears were accorded legal protection and received the Journal. By action of the House of Delegates 1931 members in arrears will be placed upon the suspended list, their legal protection is terminated and the Journal discontinued.

However, by action of the House of Delegate, these delinquent members may continue their membership and obtain all benefits if they will avail themselves of the deferred payment plan and execute a note due in one year.

If you are in arrears, and there are some 375 who are, see your County Secretary and arrange to remain in good standing by this deferred payment plan. It is essential that you attend to this important detail before January 20.

NUMBER OF MEMBERS NOT PAID IN COUNTY SOCIETIES

	1930 and 1931	1931	Total
Alpena		1	1
Northern Michigan.....		2	2
Bay	2	3	5
Berrien	3	16	19
Branch	1	1	2
Calhoun		2	2
Chippewa-Mackinac	1	1	2
Clinton	2	2	4
Delta		2	2

Dickinson-Iron	2	3	5
Eaton	2	1	3
Genesee	3	13	16
Gogebic		3	3
Grand Traverse-Leelanau	1	2	3
Gratiot-Isabella-Clare	1		1
Huron	1	1	2
Ingham	5	5	10
Ionia-Montcalm		3	3
Jackson	1	5	6
Kent	5	29	34
Lenawee		2	2
Livingston	2	1	3
Macomb	1	8	9
Marquette-Alger	3	1	4
Mason		2	2
Midland		1	1
Monroe		3	4
Newaygo	1		1
Oakland	2	22	24
Ottawa	1	1	2
Saginaw	1	4	5
Shiawassee		1	1
St. Clair		2	2
St. Joseph		3	3
Tuscola		1	1
Washtenaw	3	7	10
Wayne County	44	155	199
	80	216	296
	124	371	495
	371		

Total not paid 1930 and 1931.....495

COUNTIES PAID IN FULL FOR 1931

Barry	Menominee
Cass	Muskegon
Hillsdale	O. M. C. O. R. O.
Houghton	Ontonagon
Kalamazoo	Sanilac
Lapeer	Schoolcraft
Luce	Tri
Manistee	Oceana
Mecosta	

MINUTES OF THE SPECIAL COMMITTEE FOR THE SURVEY OF STATE HEALTH AGENCIES

1. The Committee met in Lansing at 5:00 P. M. on December 2, 1931, with Chairman Marshall presiding and the following committee members present:

W. H. Marshall, Chairman, C. S. Gorsline, L. C. Christian, F. A. Baker, Bert U. Estabrook, F. C. Warnshuis, Secretary.

2. The minutes of the previous meeting held in Jackson were read and approved as presented.

3. The Secretary reported upon his negotiation with the several foundations in a quest to secure the financing of a complete survey of medical agencies in Michigan. Inasmuch as no definite binding reply had been received, this report of progress was accepted and the activities along this line directed to be continued.

4. C. S. Gorsline reported upon his interview with the Michigan Manufacturers Association and stated that that Association and its manager would lend its every assistance to this committee and its work, and would also aid to a certain extent in defraying the expenses of the survey that was related to industrial medicine and surgery and the care of employees.

5. Dr. Estabrook reported progress in regard to his conference with federal health agencies and indicated that he would have a complete report ready for the next committee meeting.

6. Dr. Baker reported upon his conference with the American Hospital Association and submitted the following letters as indicative of the progress that he had made:

November 14, 1931.

Dr. S. W. Caldwell
American Hospital Association
Eighteen East Division Street
Chicago, Illinois.

Dear Dr. Caldwell:

The enclosed communication was forwarded to me and is being returned to you as it is obviously intended for the Association.

This is the type of survey I believe the Association should sponsor because it involves studies which would be valuable to the whole hospital field. I have never believed that the Association was in a position to conduct individual hospital surveys and only conducted them myself while connected with the Association because there was no one else available.

There are grave questions affecting the cost of medical care directly concerned with hospitalization, some of which I endeavored to bring out in my paper presented at the American College of Surgeons meeting in New York, and every one of them is a problem which the Association should be concerned about. Here is an opportunity to join with a splendid group whose objective is a search for the truth in a confusing field of conjecture, misunderstanding and conflicting evidence.

In view of the financial limitations of the Association I would suggest that instead of contributing funds to the proposed survey you offer services, and I for one will be willing, if officially requested, to contribute at least one week of my time to such an understanding without charge.

With kind regards, I am

Very sincerely yours,
William H. Walsh, M.D.

American Hospital Association
Eighteen East Division Street
Chicago, Ill.

November 25, 1931.

Dr. Frederick A. Baker,
1102 Peoples State Bank Bldg.,
Pontiac, Michigan.

My dear Dr. Baker:

I have your communication under date of November 9th, which was forwarded to this office by Dr. William H. Walsh, former Executive Secretary of the American Hospital Association.

The American Hospital Association is intimately concerned with such a study as your committee proposes to make. We are particularly interested in being of service to your committee. We will assist you and will join you in working out this survey.

We cannot commit ourselves in assisting in the financing of such a survey, as this would be a matter to be considered by the Board of Trustees, but in every possible way we are at your service and will not only help you but will appreciate the opportunity to assist you and your committee.

Very respectfully yours,
(Signed) Bert W. Caldwell,
Bert W. Caldwell, M.D.
Executive Secretary

7. Dr. Christian reported upon his questionnaire and investigation as to the extent to which county medical societies were entering into negotiations with public officials for the care of the indigent in their respective counties. The replies to this questionnaire were incomplete. A complete report of the findings will be reported and ready for the next committee meeting.

8. The committee then engaged in a lengthy discussion of the features and phases of the proposed survey and the methods by which it should be handled and the results that are possible to be obtained.

9. Upon motion of Christian-Gorsline, the Chairman was requested to interview the Tuberculosis Organization officials and ascertain their attitude and suggestions in regard to this survey.

10. The committee took notice of the proposed inauguration of work by the recently organized Michigan Association for birth control and upon motion of Christian-Baker, Dr. Estabrook was requested to be present at the meeting that is to be held in Detroit on December 3, and to ascertain the plans, purposes and policies of the Michigan Association for birth control and report his findings at the next committee meeting.

11. Upon motion of Baker-Gorsline, the Secretary was directed to inform the Executive Committee of the council of the Michigan State Medical Society that the committee would be ready to render a preliminary and informative report at the special meeting of the House of Delegates, and that the Executive Committee of the Council be advised that the committee recommends that the special meeting of the House of Delegates be called in Jackson, as provided by the petition, on January 20, 1932. The committee feels that it will have a report that will present certain definite recommendations that will require the consideration of the House of Delegates before the work of this committee can be extended to a definite conclusion.

12. Upon motion of Gorsline-Christian, each member of the committee was directed to compile a written report of the investigations and inquiries that were assigned to them; that the Chairman would prepare an introduction to the general report of the committee and would also prepare that part of the report that deals with anti-tuberculosis work and clinics. The committee to then meet and review these integral reports pre-

paratory to formulating its final report for presentation to the House of Delegates.

13. Upon motion of Christian-Gorsline, the committee resolved to hold its next meeting in Lansing at 5:00 P. M. on Wednesday, January 6, 1932.

F. C. WARNSHUIS,
Secretary.

MINUTES OF THE NOVEMBER MEETING OF THE EXECUTIVE COMMITTEE OF THE COUNCIL

1. The Executive Committee of the Council of the Michigan State Medical Society met in Grand Rapids at 6:00 P. M. on November 18, 1931. Present:

B. R. Corbus, Chairman
J. D. Bruce
Henry Cook
Geo. L. LeFevre
Carl F. Moll, President
F. C. Warnshuis, Secretary

2. The Secretary reported that in compliance with the resolution of the House of Delegates and the Council he has caused to be provided bills payable in favor of the State and also the County Medical Society for use in the deferred payment plan for membership dues. These have been sent with an explanatory letter to the officers of the county medical societies. On motion of LeFevre-Cook, the Secretary was directed to open a notes payable account and to place these securities with the Treasurer of the society subject to the future action of the Council.

3. The Secretary imparted the activities and progress that was being made by the special committee on Survey of Health Agencies in Michigan, and reported that the committee is actively engaged in the solution of its problem and that after its meeting on December 2 it will have certain recommendations to present to the Council.

4. Upon motion of Bruce-LeFevre, the Secretary was directed to write to the chairman of the legislative committee and ascertain from him where he wished the files of the former legislative committee to be sent in order that they may be available for the use of the present legislative committee; that upon receipt of this information the Secretary was directed to write to the secretary of last year's legislative committee and request him to so forward the committees' files.

5. The Secretary made a verbal report of the activities of the special committee on radio broadcast and outlined a general plan that the committee had in mind for a uniform broadcasting from the several radio stations that are to be utilized in this work. Upon motion of LeFevre-Bruce, an appropriation of \$200.00 was made for typist and clerical assistance in preparing a portfolio of broadcasts.

6. The Secretary reported that President Moll had appointed a special committee on War Veterans Relief composed of

Dr. Angus McLean, Chairman
Dr. J. G. R. Manwaring
Dr. R. B. Harkness
Dr. W. E. Wilson
Dr. W. C. Ellet

for the purpose of imparting to the legion posts of Michigan the American Medical Association plan of medical care and hospitalization for veterans.

7. The Councilor of the 5th district, Dr. B. R. Corbus, reported the details of the arrangements

that were being perfected for the testimonial dinner to be given for Regent Richard R. Smith on December 16, 1931. On motion of LeFevre-Cook, the proposed plan was approved, and the Councilor and the State Secretary were authorized to complete the details of arrangement, and state society would bear the expenses incurred in securing invited guests.

8. In transmitting the minutes of the last executive committee meeting, that was held in Flint, it was noted that the executive committee had appropriated an honorarium of \$300 per year for the Chairman of the Council. This was an error, and members of the Council are hereby informed of this correction. The appropriation was for the purpose of defraying the office and other expenses incurred by discharging the duties of the office of the chairman and an amount of \$250 was therefore appropriated for these expenses and not as an honorarium to the Chairman.

The Executive Committee adjourned at 10:30 P. M.

F. C. WARNSHUIS, *Secretary*.

CIVIC AND INDUSTRIAL RELATIONSHIP COMMITTEE

The Civic and Industrial Relations Committee held a meeting in Detroit, at the Book Cadillac Hotel, December 11, at 6:00 P. M. Drs. A. R. McKinney, H. F. Dibble, L. O. Geib, Grover C. Penberthy, Philip Riley and H. S. Collisi were in attendance. The present status of the question referring to sick and accident insurance reports was discussed and the following resolution passed. All physicians are requested to comply with it.

"On every sick and accident claim proof, that is made out by a physician, the physician should bill the insurance company involved for \$2.00, as per resolutions adopted in Jackson, September, 1929."

This means that the physician should append a statement for \$2.00 for his services to each report blank filled out, whether it is requested by the claimant or is mailed directly to the insurance company. This procedure should be followed until the Bureau of Medical Economics of the American Medical Association makes its report at the New Orleans meeting in 1932.

The committee believes that insurance companies can greatly assist physicians in securing payment of services to persons awarded settlement claims, for either sick and accident benefits, or for liability for injuries received, as in automobile accidents. The growing tendency of injured persons in deferring payment of physicians' and hospitals' bills, until long after settlement has been made with them by insurance companies, is decidedly unfair. It is usually through the efforts of physicians that settlements are readily effected, and yet physicians are nearly always the last to be paid, if at all, for many times the proceeds of settlement are used by the claimant for investments, unnecessary purchases and even luxuries.

The committee intends to have a conference with representatives of a number of outstanding insurance companies in the near future. The following questions will be discussed:

1. Can a plan be formulated to protect the medical expense attached to the care of the injured covered by liability insurance?

2. Is there any law prohibiting the insurance company acting as agent for medical men in settlement of the claim?

3. Can medical men be of service in protecting the insurance company against fraud?

4. Would such protection correspond to the protection given a company or bank loaning money for building purposes? (Refer to recent action of the State Legislature on the Building Code Law.)

5. Have insurance companies any objection in co-operating with physicians in the collection of medical bills? Would it complicate settlement?

Each committee member was requested to make a preliminary survey of the situation in his respective locality, by holding an informal conference with insurance agents, with whom he is acquainted, and to report his findings at a subsequent meeting. The chairman was instructed to obtain a legal ruling whether physicians could secure assignments on settlement claims.

If possible, this information will be obtained from the legal departments of insurance companies and also the State Insurance Department.

The matter of securing assignments on life insurance settlements was also discussed.

It was decided that the committee should revive the question of the medical aspects of a compulsory automobile insurance law. By analyzing the attitude taken by insurance companies, automobile associations and manufacturers, hospitals, welfare and charitable organizations and other interested persons, it is hoped that a definite policy may be adopted toward proposed legislation, which may be introduced at the 1932 Legislature.

It is believed that the Michigan State Medical Society and hospitals throughout the state can be of valued service in contributing statistics of the numbers of injured persons, the length of disability, the costs of medical and hospital care, and the financial strain, which is being placed upon physicians, hospitals and the public by negligent and irresponsible drivers, whose liabilities are not covered by insurance.

The meeting adjourned at 10:00 P. M.

HARRISON S. COLLISI, M.D., *Chairman*.

This issue contains the second of a series of articles on medical problems and organizational work. Dr. Whalen, the Editor of the *Illinois State Medical Journal*, discusses Clinics.

Dr. H. J. Beel's address as retiring president of Kent County Medical Society, published under Society News, merits reading by every member.

Hayes Hotel, Jackson, will be the place where the Special Meeting of the House of Delegates will be held. Delegates are urged to write to the hotel for room reservations.

The mid-winter session of the Council will be held coincident with the Special Meeting.

Annual dues are now payable. Aid your County Secretary by sending him your check today.

The Radio Committee has sent a portfolio of sixteen radio talks on medical and health subjects to Bay, Ingham, Jackson, Berrien and Marquette County Societies. These talks will be broadcasted over stations located in these counties. Tune in on these stations and also advise your patients and friends to listen in. The broadcast will be made by members selected by county officers.

The Fifth Councilor District will compliment Dr. R. R. Smith, recently appointed Regent, with a dinner on January 14, given in Grand Rapids. Members throughout the state are cordially invited to attend. Send your reservations to the State Secretary.

And so ends another year.

COUNTY SOCIETIES

BAY COUNTY

Fifty members of the Society were dinner guests of retiring President F. S. Baird at the Bay City Country Club, Wednesday evening, December 9, 1931.

This was the annual meeting at which the following officers were elected for the ensuing year:

President, Dr. M. R. Slattery; vice president, Dr. E. S. Huckins; secretary-treasurer, Dr. L. Fernald Foster; delegate, Dr. F. S. Baird; alternate, Dr. C. A. Stewart; medico-legal advisor, Dr. A. W. Herrick; senior censor, Dr. R. N. Sherman.

CHIPPEWA-MACKINAC

At the December meeting of the Chippewa-Mackinac Medical Society, the following officers were elected: President, Dr. I. V. Yale, Sault Ste. Marie; vice president, Dr. B. T. Montgomery, Sault Ste. Marie; secretary, Dr. J. G. Blain, Sault Ste. Marie; Delegate to State Medical Society Meeting, Dr. F. C. Bardy, Sault Ste. Marie.

JAMES G. BLAIN, M.D., *Secretary*.

GENESEE COUNTY

On November 11, 1931, the annual election of officers of the Genesee County Medical Society resulted as follows:

President, Dr. R. S. Halligan; President-Elect, Dr. J. C. MacGregor; Secretary, Dr. C. W. Colwell; Treasurer, Dr. J. W. Evers; Medico-Legal, Dr. H. E. Randall.

Delegates: Three Year Term—Dr. F. Reeder; Alternate, Dr. H. Randall. Two Year Term—Dr. G. Curry; Alternate, Dr. D. Wright. One Year Term—Dr. J. Connell; Alternate, Dr. Max Burnell.

C. W. COLWELL, M.D., *Secretary*.

GRATIOT-ISABELLA-CLARE COUNTY

The November dinner meeting of the Gratiot-Isabella-Clare County Medical Society for the members and their wives was held in the Wright Hotel, Alma, Thursday, November 12.

Including visitors, thirty-four had dinner together. After dinner, President Harrigan called the meeting to order.

Minutes of the previous meeting were read and approved.

A letter was read from Secretary Warnshuis, relative to the doctors assisting in the State's unemployment program. President Harrigan appointed Drs. L. F. Hyslops and A. D. Hobbs as a committee to act in this matter.

President Harrigan then introduced Dr. Richard R. Smith from Grand Rapids, who gave a very interesting and instructive illustrated talk on Hawaii and the Fiji Islands and New Zealand and Australia.

Doctor Smith's pictures and talk were enjoyed by everyone present.

On behalf of the Society, President Harrigan thanked the doctor for bringing this interesting and instructive information to the Society.

The meeting adjourned.

E. M. HIGHFIELD, M.D.
Secretary.

IONIA-MONTCALM COUNTY

The November meeting of the Ionia-Montcalm Medical Society was held at the Belding City Hall, on November 10, 1931, at 8:00 P. M., with thirty-two physicians, dentists and guests present.

Doctor Pinkham, assisted by Doctor Armstrong, had arranged a splendid program, with preliminary refreshments of cider and apples.

The meeting was called to order by Vice-President Norris, who called upon Doctor Pinkham to take charge of the scientific program.

He introduced Dr. G. L. Leslie, of Howell, who spoke on "The Methods and the Importance of Early Diagnosis of Tuberculosis and its Surgical Treatment." He emphasized the value of X-ray as the most valuable single method in diagnosis.

Dr. Leslie also commented upon the fact that very few cases of minimal tuberculosis are admitted to the sanatoria, while many non-tuberculous cases are received with a diagnosis of tuberculosis. He showed a series of very interesting films illustrating tuberculous and non-tuberculous chests, and various surgical measures of treatment.

Doctors Toan, Hoffs, Pankhurst, Maynard, Bowser, Stanton, Norris, Johns, Hansen, and Leslie discussed the subject.

Dr. J. H. Armstrong introduced Vernor H. Eman, D.D.S., of Grand Rapids, who read a paper on "Oral Sepsis and its Relation to Systemic Diseases." He stressed the importance of X-raying all teeth, as well as edentulous areas, fourteen films being necessary. He used blackboard illustrations, which added to the clearness of his paper.

This paper was discussed by Dr. George J. Broodman, of Grand Rapids, and Doctors Smith, Pankhurst, Stanton, Pinkham and Eman.

The business meeting followed, Dr. Norris presiding.

Minutes of the October meeting were read and approved.

Resolutions on the death of Dr. Will H. Lester were read and approved.

Communications from the State President, Doctor Moll, regarding the Relief Commission were received and approved. Doctor Norris appointed Doctors Johns, Johnson and Stanton to this committee.

Dr. J. J. Johns was appointed Chairman on arrangements for the annual meeting to be held in Ionia, on December 8, 1931.

The meeting adjourned.

JOHN J. McCANN, *Secretary*.

RESOLUTIONS UPON THE DEATH OF DR. WILL H. LESTER

WHEREAS, the sudden and untimely death of our fellow member, Doctor Will H. Lester, on October 9, has come as a distinct loss to each of us, and

WHEREAS, he has been since its organization a loyal member of the Ionia-Montcalm Medical Society, therefore be it

RESOLVED: that in the death of Doctor Lester the Society and its individual members have suffered the loss of a loved and respected friend and colleague, and that we extend to his family our heartfelt sympathy in their bereavement, and be it

RESOLVED: that a copy of this Resolution be spread upon the permanent records of the Society, and that a copy be forwarded to the family of Doctor Lester.

F. A. JOHNSON,
JOHN J. McCANN,
F. M. MARSH.

The annual meeting of the Ionia-Montcalm Medical Society was held at the Reed Inn, Ionia, on December 8, 1931, Doctor Norris presiding, with twenty-four members and guests present.

After a steak dinner, Dr. Norris named a nominat-

ing committee consisting of Doctors Johnson, Bower, and Toan, then turned the meeting to Dr. Johns, who had charge of the scientific program.

Dr. Kretchmar, of Battle Creek, presented a comprehensive, illustrated paper on the various phases of diagnosis and treatment of the acute abdomen.

Discussion was led by Dr. A. O. Hart, of St. Johns, followed by Drs. Dean Hart, Bower, and Kretchmar.

Dr. Thomas D. Gordon then gave his paper on infant feeding; advocating simple, standard mixtures as against the numerous proprietaries; he also gave some very practical suggestions as to the care of teeth in children.

Discussion and questions were presented by Drs. Hoffs, Dean Hart, Norris, Bower, and closed by Dr. Gordon.

Business Meeting: Minutes of the November meeting were read and approved.

Communications were read and accepted; that from Ingham County Society was laid on table.

Motion was made that dues be \$15.00; carried.

The Nominating Committee reported the following nominations: President, Dr. W. W. Norris, Portland; vice president, Dr. H. B. Weaver, Greenville; secretary-treasurer, Dr. John J. McCann, Ionia; delegate, Dr. W. W. Norris, Portland; alternate, Dr. A. J. Bower, Greenville; Chairman Medico-Legal Committee, Dr. J. F. Pinkham, Belding.

The report of the Nominating Committee was adopted.

The committee appointed for the January meeting at Greenville: Dr. Weaver and Dr. Bower.

The meeting adjourned.

JOHN J. McCANN,
Secretary.

JACKSON COUNTY

The October meeting of the Jackson County Medical Society was called to order by Dr. Ferdinand Cox, president, in the Memorial room of the Elks Temple, after a six o'clock dinner.

Dr. Clarke, chairman of the Health Education Committee, gave a summary of the work done by this committee during the past year. Their work has been of an educational nature, directed towards arousing the public to the importance of health and the value of periodic health examinations, and towards the development of proper medical service and advice. The public was reached through the press, the platform and through visual education and demonstration. During the year there were twenty-seven news items to appear in local papers, sponsored by the Society, and one paid announcement. The committee also sponsored ninety-five lecture programs in the city during the year. In the visual education campaign there were three moving pictures used, thirty poster exhibits, four thousand pamphlets distributed, twenty-two food exhibits, eight cooking demonstrations, and four hundred twenty-five Mantoux tests completed. All of this was done at a cost of \$238.96 to the Society. Plans for extending this work are in progress. A conference with leaders in health education activities in adjoining counties will be held in Jackson next month for the purpose of determining how this may be carried on.

Dr. Riley, chairman of the Golf Committee, gave a report of the doctors' tournament, which just closed. The Silver Cup donated by Mr. George Campbell was won by Dr. W. H. Enders, who was runner up last year. Dr. Cooley won second prize of ten dollars in trade at the Sun Building drug store. The low gross score was won by Dr. Leahy, and the high gross score by Dr. Marsh.

It was moved by Dr. Riley that the committee re-

cently appointed by President Moll to investigate the work of Clinics and Health Agencies be invited to Jackson to hold their meeting on November 5. Motion seconded by Dr. Munro. Motion carried.

It was reported that on a few occasions county indigent cases have not been allowed to have the physician of their choice, as was agreed by the County Board of Supervisors and local physicians. Physicians are requested to report these cases to Dr. John Smith. It was also reported that two of the supervisors were not respecting the fee schedule adopted. These should also be reported.

Dr. O'Meara reported that there was agitation in some quarters to secure a new Secretary to the Michigan State Medical Society. He moved that the Jackson County Society go on record as approving the work of Dr. Warnshuis, and that he be retained as secretary in the future. Motion was seconded by Dr. Riley. Motion carried. It was also moved that a letter to this effect be sent to each County Society.

There was considerable discussion about the care of the city indigent cases. Dr. Enders moved that a committee be appointed to work out a plan for taking care of these patients. Dr. Harris seconded the motion, and the motion carried.

The meeting was then turned over to Dr. Frank Pray, program chairman, who introduced Dr. Yeomans of St. Joseph, who spoke upon some of the problems of the State Board of Registration. The Society went on record as opposing the annual registration of physicians and the \$15 fee for the registration of specialists.—W. H. ALTER, *Secretary.*

KENT COUNTY

The twenty-ninth annual meeting and election of officers held Wednesday evening, December 9, 1931, at the Pantlind Hotel, Grand Rapids, Michigan, brought to a close the activities of the Kent County Medical Society for the year 1931.

The year ends with a total membership of 236, and of this number, four members, namely, Drs. Albertus Nyland, Ralph H. Spencer, L. A. Roller, and S. Rosema, are honorary members of both the state and local societies. At this meeting Dr. Collins H. Johnston was made an honorary member, and his name is to be proposed also to the State Society for honorary membership in that organization.

At this meeting also the Society, voicing their approval of and expressing their confidence in Dr. F. C. Warnshuis, unanimously passed a resolution favoring his retention as State Secretary.

Through death our local society during the past year lost two members, namely, Dr. Frank Kinsey and Dr. E. B. Strong. Seventeen new members during the year were added to our rolls.

Sixteen scientific meetings were held during the year—many of them dinner meetings in honor of distinguished guest speakers of national reputation, amongst whom may be mentioned Dr. Alan Brown of Toronto, Dr. William A. Thomas of Chicago, Dr. Joseph Colt Bloodgood of Baltimore, Dr. Grover C. Penberthy of Detroit, Dr. David S. Hillis of Chicago, and Dr. A. Desjardins of Rochester, Minnesota.

The following is a complete list of the officers elected and the committees appointed for the ensuing year: Robert H. Denham, president; Harold C. Robinson, vice president; John M. Whalen, secretary-treasurer; Burton R. Corbus, councillor, Fifth District; George L. McBride, Defense League representative.

Delegates to the State Society: G. H. Southwick, J. D. Brook, A. V. Wenger, W. E. Wilson, and R. H. Denham.

Alternate Delegates to the State Society: A. M. Moll, E. N. Nesbitt, William A. Hyland, E. W. Schnoor, and C. F. Snapp.

Board of Directors: Thomas D. Gordon, Chairman, William A. Hyland, Horace J. Beel, Robert H. Denham, and John M. Whalen.

Program Committee: George H. Southwick, Chairman, Henry Duiker, and P. L. Thompson.

Legislative Committee: Elmer W. Schnoor, Chairman, Leon E. Sevey, Alexander M. Martin, O. H. Gillett, and C. E. Hooker.

Entertainment Committee: David B. Hagerman, Chairman, W. J. Butler, F. L. Doran, Donald Chandler, and Joseph De Press.

Library Committee: John C. Foshee, Chairman, G. L. Bond, R. R. Smith, A. B. Smith, and F. P. Carrier.

Public Health Education Committee: Don B. Cameron, Chairman, W. L. Bettison, L. O. Grant, L. A. Ferguson, and P. W. Kniskern.

Visiting Sick Committee: Collins H. Johnston, Chairman, William Northrup, J. R. Rogers, R. J. Hutchinson, and J. B. Whinery.

MARQUETTE-ALGER COUNTY

The following is a copy of resolutions adopted at the last meeting of the Marquette-Alger County Medical Society:

WHEREAS, One of our esteemed confrères, Dr. Alfred W. Hornbogen, recently met a violent death in the performance of his duties, and

WHEREAS, Dr. Hornbogen had been for many years identified with the various activities of the medical societies of the County, Upper Peninsula, State, and Nation

Therefore be it

RESOLVED, That it is with feelings of regret that we have had to witness his untimely demise, and removal from our midst, and be it further

RESOLVED, That the Marquette-Alger County Medical Society feels an irreparable loss in the death of Dr. Hornbogen, and pays due respect to his ability and his accomplishments in the work of organized medicine throughout the United States.

Be it further

RESOLVED, That a copy of these resolutions be spread upon the minutes of the Marquette-Alger County Medical Society, that a copy be sent to his bereaved family and relatives, and that a further copy be sent to the Michigan State Medical Society.

D. P. HORNBOGEN, *Secretary*.

MECOSTA COUNTY

A regular meeting of the Mecosta County Medical Society was held at Big Rapids, Tuesday, November 10, 1931. Present: Drs. MacIntyre, Dodge, Campbell, Grive, Franklin, Yeo, Treynor, Chess, Kilmer, Bruggema, Holm and Burkart. Dentists: Shepherd, Pryor, Miller, Rogers, Zetterstedt. Guest: Dr. George LeFevre of Muskegon, speaker of the evening.

Dinner was served at Mrs. Osborn's at 6:45 P. M., after which the members adjourned to the offices of Drs. Grieve and Campbell, where the regular order of business was taken up.

Communication from State Medical Society relative to cooperating with county unemployed relief was read. Dr. Campbell said the County had appointed a committee of which he was chairman, and they were functioning. On motion of Dr. Treynor, seconded by Dr. Campbell, Drs. Kilmer, Grieve and Franklin were named as Relief Committee of our Society.

Dr. Chess suggested that some central place, preferably Big Rapids, be selected for our regular meetings. Considerable discussion resulted in appointment of a committee to investigate and report. Drs. Campbell, Treynor and Chess were appointed by the President.

The meeting was then turned over to the Program Committee. Dr. Yeo, Chairman, introduced Dr. George LeFevre of Muskegon, who in preliminary remarks referred to Dr. William T. Dodge, who had been an associate on the State Board and in the State Society, and expressed pleasure at his being with us. The speaker took up the recent meeting of the State Medical Society and dilated on the excellent work done by various committees. Attention was invited to the three great organizations that were doing so much for Public Welfare, *viz.*, Couzens Fund, Kellogg Foundation, and State Department of Health. The speaker advised that in view of the fact that many sparsely inhabited counties in the north and east part of the state were handicapped by lack of expert laboratory and other aids to diagnosis, and in order to remedy this situation, a properly equipped place was to be erected and financed by the Couzens Fund. The good work done by Dr. Barber of the Medical Defense Committee of the State Society was commented upon.

The meeting was turned back to general business. After a rising vote of thanks was given our hosts, Drs. Pryor and Miller, and the speaker, Dr. LeFevre, the meeting adjourned.

JOHN L. BURKHART, *Secretary*.

MUSKEGON COUNTY

Dr. M. E. Stone has been elected secretary and treasurer of the Muskegon County Medical Society. The other officers elected are: President, Dr. F. H. Bartlett; vice president, Dr. Robert J. Douglas; delegate to state convention, Dr. F. W. Garber, Sr.; alternate delegate, Dr. C. J. Bloom; medical legal advisor, Dr. George L. LeFevre.

Plans were finally summated for taking care of the hospitalized indigents of the county, which provide that the Muskegon County Medical Society receive \$10,000 per year for the patients taken care of in Muskegon hospitals.

ROBERT J. DOUGLAS, M.D.

SHIAWASSEE COUNTY

Shiawassee County Medical Society was addressed by Circuit Court Judge Joseph H. Collins at the annual meeting December 10, 1931, on "Medical Jurisprudence." A large representation was present. A four-reel "movie" film, entitled "Traumatic Surgery," was shown by Dr. A. L. Arnold, Jr.

The annual election of officers resulted as follows: President, Dr. A. M. Hume; vice-president, Dr. R. W. Teed; secretary-treasurer, Dr. W. E. Ward; delegate, Dr. I. W. Greene; medico-legal representative, Dr. J. J. Haviland. Board of Directors—Drs. A. L. Arnold, Jr., C. A. Crane, and W. F. Weinkauff.

W. E. WARD, *Secretary-Treasurer*.

MENTAL HYGIENE AND ITS RELATIONSHIP TO THE MEDICAL PROFESSION

Lloyd H. Ziegler, Albany, N. Y., reviews briefly the history of the mental hygiene movement in the United States and presents the results of interviews among 103 physicians practising medicine and surgery relative to their interest and problems in neuropsychiatry. He believes that there is need and desire for more knowledge of mental hygiene among these practicing physicians and that mental hygiene is part of a public health movement, depending on knowledge and education, in which the medical profession of the future will be required to take a larger responsibility.—*Journal A. M. A.*

WOMAN'S AUXILIARY, MICHIGAN STATE MEDICAL SOCIETY

MRS. J. EARL MCINTYRE, President, Lansing
MRS. W. L. FINTON, Secretary, Jackson

OFFICERS

President, Mrs. J. Earl McIntyre, 600 South Grand Ave., Lansing.
Vice-Pres., Mrs. F. A. Mercer, 87 Ottawa Drive, Pontiac.
Secy.-Treas., Mrs. W. E. McNamara, 608 South Capitol, Lansing.

EXECUTIVE BOARD

Mrs. J. Earl McIntyre, 600 South Grand Ave., Lansing.
Mrs. F. A. Mercer, 87 Ottawa Drive, Pontiac.
Mrs. W. E. McNamara, 608 South Capitol, Lansing.
Mrs. L. J. Harris, 609 West Washington, Jackson.
Mrs. Charles J. Barone, Publicity Chairman, 2270 Davison Ave. West, Detroit.
Mrs. Herbert Heitsch, 549 North Perry St., Pontiac, Hygeia Chairman.

MEDICAL ORGANIZATION AND THE AUXILIARY

From the day when we returned from our honeymoon and cast our individual lives with that of a doctor of medicine, yes, even in our courtship days, we who constitute the Medical Auxiliary have heard of the County Medical Society. While in general we learned that the county society was the doctors' medical guild and where doctors met, still to many of us its meetings only meant that we were to be alone that night, or that we could not accept this or that dinner or bridge invitation. Few of us really knew, and many still do not know, the objects or purposes of the county medical society.

Just what the county society is and what its objectives are is fundamentally essential for each auxiliary member to know if we ever hope to cause our County and State Auxiliary to attain in satisfactory degree the objectives of our organization.

It has, therefore, been my thought that during my presidential year, and in my contacts with the county units, I might contribute to our work by briefly imparting to you the major activities of county, state and national medical societies.

To those who believe in the soundness and equity of a representative form of government the plan whereby the county society is made the unit of organization must commend itself as both wise and just. The great underlying plan of all medical organization is to reach the individual doctor, to keep him abreast of the progress of medicine, to broaden his vision, to cause him to realize that he has public duties in his county and state.

In the Constitution of every county society we find this article, "Our ends sought are: A compact society with a view to the extension of medical knowledge and the advancement of medical education, and to the enactment and enforcement of just medical laws. To the promotion of friendly intercourse among physicians and the fostering of their material interests and to the enlightenment and direction of public opinion in regard to the great problems of medicine, so that the profession shall become more capable within itself and more useful to the public in prolonging and adding comfort to human life." If one but ponders upon this concrete statement a new light will break upon us and we will readily perceive a new, broader and clearer conception of what medical societies truly are. There will also be created a new vision that will unfold to us avenues along which we, the Auxiliary, may

become constructively active and aid in attaining the ends we seek.

Permit me to roll back the curtain still farther. The plan of organization is as follows: Doctors in a county constitute the county society. The county societies in a congressional district constitute the Councilor District or group. All these groups in a state form the state medical society. The state societies of the union form the American Medical Association.

The only door of entrance to membership in the state and national organizations is through the county medical society. The county society is the sole judge and censor.

The legislative body of the state society is the House of Delegates to which each county society sends delegates—one for every fifty members. The House of Delegates elect the Council, which is the executive board of the state society.

The American Medical Association's legislative body is the national House of Delegates composed of delegates from every state and territory, and has a membership of 175, presided over by a speaker. Michigan has been honored by having one of its members serve as Speaker for a period of over ten years.

Such, then, in general is the plan of medical democracy.

The American Medical Association concerns itself with national problems. The state society is concerned with state and county problems, and the county society is concerned with local and individual problems. All function in unison and subscribe to one another their combined support and influence.

It would consume more than the time at my disposal were I to impart in detail the many, many activities in which these units are engaged. I can but mention a few of the major undertakings: Legislation, Health Education, Medical Education, Hospitals, Frauds, Child Welfare, Pure Foods, Internes Training, Legal Medicine, Economics, Post Graduate Education, Public Health, Quackery, Reference Libraries, Medical Publications, Social Medicine, representation in local, state and national movements, affecting all contacts of life, and a host of other major and minor movements. These functions have as their ultimate and underlying motive the protecting and enhancing of interests and personal welfare of your doctor husband or father.

Do you not now agree with this insight that we as an auxiliary have an enduring inspiration to press on with zeal and enthusiasm and contribute our aid and efforts to attain the goals of medical organization and acquit ourselves of the tasks assigned and assumed by our auxiliary.

In conclusion, it gives me pleasure to extend to you Hearty Greetings with the wish that the New Year will be rich in health, happiness and prosperity for all of us.

MRS. J. EARL MCINTYRE,
President.

BAY COUNTY AUXILIARY

The annual meeting of the Women's Auxiliary of Bay County Medical Society was held at the home of Mrs. L. Fernald Foster on Wednesday evening, December 10. A pot luck dinner was served to twenty members. The serving table was most attractive with Christmas colors carried out. A large bowl of red roses graced the center of the table and tall red candles in brass candlesticks completed the decorations. Dinner was served at small tables. The election of officers followed with the following ladies chosen for the ensuing year: President, Mrs. C. A. Stewart; First Vice President, Mrs. H. P. Lawrence; Second Vice President, Mrs. E. A. Wittmer; Secretary, Mrs. Roy Perkins; Treasurer, Mrs.

H. M. Gale; and Corresponding Secretary, Mrs. Chas. M. Swantek. It was decided to hold meetings monthly and to sew for hospitals and other charitable organizations. A money donation was sent to the knitting club, which is knitting sweaters for the poor. After a social hour the members adjourned to meet in January at the home of Mrs. C. W. Ash. Mrs. A. W. Herrick presided in the absence of Mrs. Paul Urnston, who is spending the winter in Texas.

LOUISE M. SWANTEK,
Corresponding Secretary.

WAYNE COUNTY AUXILIARY

The tea and musical given by the Woman's Auxiliary to the Wayne County Medical Society Tuesday, November 10, at the Colony Club was a preface to the annual membership drive. The wives of all members of the Wayne County Medical Society were invited to be the guests of the Auxiliary.

Dr. H. W. Plaggemeyer, President of the Wayne County Medical Society, addressed the members on the subject, "Aims and Purposes of an Auxiliary." He outlined some work for the Auxiliary for the current year.

The December meeting held in the Club Rooms of the Wayne County Medical Society on December 8, at 2:30 P. M., was well attended and much interest was shown in the welfare work the Auxiliary is doing. The ladies were all busy knitting mittens and sewing for Detroit's needy school children.

Mr. Baxter, Chief Probation Officer from the Juvenile Court, spoke on "Juvenile Delinquency."

A short musical program followed.

On December 5, a number of the north end members were invited to meet at the home of Mrs. Warren L. Hulse, to sew and knit. A very busy afternoon followed and the ladies thoroughly enjoyed the informal tea and social hour.

Mrs. Claire L. Straith was hostess to a large number of members at her home on December 14. Mrs. Straith and Mrs. A. O. Brown, Chairman of the Welfare Committee, supervised the work and much was accomplished. Those present voted the meeting a success in every way.

Officers and Committee Chairmen of the Woman's Auxiliary to the Wayne County Medical Society for the year 1931-1932 are as follows: President, Mrs. R. E. Loucks; vice president, Mrs. Claire Straith; corresponding secretary, Mrs. L. O. Geib; treasurer, Mrs. W. Rieman; recording secretary, Mrs. Z. B. Bennett; auditor, Mrs. Leslie Henderson; custodian, Mrs. Walter Wilson; program chairman, Mrs. A. S. Brunk; social chairman, Mrs. Vinton A. Bacon; membership chairman, Mrs. Alex Cruikshank; attendance chairman, Mrs. E. G. Minor; revision chairman, Mrs. J. H. Dempster; hospitality chairman, Mrs. Perry Burnstine; courtesy chairman, Mrs. S. P. L'Esperance; Hygeia chairman, Mrs. H. R. Liebinger; publicity chairman, Mrs. Chas. J. Barone; welfare chairman, Mrs. A. O. Brown.

JAMES G. BLAIN, M.D., *Secretary.*

MECHANISM OF GASTRIC EVACUATION

According to J. Earl Thomas, Philadelphia, gastric evacuation occurs whenever the intragastric pressure near the pylorus exceeds the resistance due to the sphincter. The gastric motor mechanism is adapted to establish this condition at regular intervals, corresponding to the rhythm of gastric peristalsis, or the gastric cycle. Such a mechanism, if allowed to operate without regulation, would empty the stomach, regardless of the state of digestion of the food, and without allowing for the ability of the intestine to handle it. Since this does not occur, the mechanism is obviously subject to regulation. Regulation results from stimuli due to conditions within

the stomach and within the small intestine. Stimuli from within the stomach are responsible for withholding the gastric contents until a satisfactory state of digestion has been attained. Stimuli from within the intestine are responsible for adapting the rate of evacuation to the functional capacity of the intestine. Regulating stimuli from within the stomach are aroused by the consistency and state of chemical digestion of the food. Chemically undigested food (especially protein) and solid particles delay evacuation. Acid, so long as it is confined to the stomach, is not a regulating factor. Intragastric stimuli delay evacuation by increasing the tone of the sphincter and of the antrum of which the sphincter is "the most efficient segment." They determine the initial evacuation and thereafter play a steadily diminishing rôle to the end of digestion. Regulation from within the intestine results from chemical and mechanical stimuli. Chemical stimuli comprise acidity (not necessarily free hydrochloric acid), products of digestion (especially of fat), and perhaps physicochemical (osmotic) conditions. These stimuli operate through two reflex paths, one in the myenteric plexus, which mediates a motor reflex, causing increase in tone of the sphincter, and another through the vagi, which mediate an inhibitory reflex (the enterogastric reflex), causing decreased motor function of the entire pars pylorica, including the sphincter. The enterogastric reflex has the lower threshold and ordinarily dominates the local reflex. It is therefore the chief if not the only factor in the chemical regulation from the intestine. Mechanical stimuli (due to distention) are kept at a minimum through a receptive relaxation of the duodenum. Chemical stimuli are diminished in effectiveness by intestinal, pancreatic and biliary secretions, which tend to neutralize acidity, and by intestinal motility, which moves the stimulating material to less irritable segments of the intestine. Thus, gastric evacuation is adapted quantitatively to the secretory and motor capacity of the intestine and its associated organs. The intestinal regulatory mechanism begins to function only after evacuation of the stomach has begun and thereafter plays a steadily increasing rôle to the end of digestion.—*Journal A. M. A.*

PROSTATE OPERATION: PROSPECTS OF PATIENT WITH PROSTATIC DISEASE IN PROSTATECTOMY VS. RESECTION

Theodore M. Davis, Greenville, S. C., urges early recognition and treatment of infection of the prostate to prevent obstructions. He believes that recognition of early obstructions and their correction by transurethral methods will lessen the number of advanced cases of prostatism. Prostatectomy, previously being the avenue offered, deterred many from seeking relief early, before irreparable damage to the urinary and other organs has occurred. Resection reduces the removal of the obstructing prostate to a minor surgical operation with the accuracy of a cystoscopic procedure and permits operation with the accuracy of a cystoscopic procedure and permits operation in the minutest detail under direct vision. Resection reduces the hospitalization to several days as compared to several weeks for prostatectomy with its economic consideration. In bars and contractures, for accuracy and ease of operation, resection excels any previously described. In these conditions there is no excuse for more radical measures. In the large hypertrophies that require one or more for resections, with its freedom from mortality and discomfort to the patient, it should be the method of choice, as these conditions can be corrected without resorting to major surgical procedures. In inoperable carcinoma, relief by resection is to be recommended over permanent suprapubic drainage.—*Journal A. M. A.*

THE DOCTOR'S LIBRARY

MATAS BIRTHDAY VOLUME. A collection of surgical essays written in honor of Rudolph Matas, New Orleans. With 102 illustrations, 5 in color and portrait of Dr. Matas. New York. Paul B. Hoeber, Inc. 1931. Price \$10.00.

This splendid volume consists of twenty-two papers mostly on surgical subjects. Of the non-surgical contributions are an appreciation of Professor Rudolph Matas; Halsted Thirty-Six Years Ago, by Joseph Colt Bloodgood; Anesthesia, by George W. Crile; The Place of the Senses in the Development of Science, by William J. Mayo; one paper, Total Rhinoplasty, is in French, by Paul Moure of Paris; one by Dr. E. Ribasy Ribas, entitled Obstruccion Intestinal Por Deformidad Congenita Del Intestino Delgado, is in Spanish. The book presents a variety of subjects of profound interest to the surgeon, ranging from four on cancer to several on vascular disease. The work is one of Hoeber's best, one which those who have known Dr. Matas or his work as a surgeon will want to own.

HERTZLER'S MONOGRAPHS ON SURGICAL PATHOLOGY. Surgical Pathology of the Skin, Fascia, Muscles, Tendons, Blood and Lymph Vessels. By Arthur E. Hertzler, M.D., Surgeon to the Agnes Hertzler Memorial Hospital, Halstead, Kansas; Professor of Surgery, University of Kansas. 260 Illustrations. Philadelphia, Montreal and London. J. B. Lippincott Company.

This is a book particularly for the group which Hazen Emerson and many others call the "Backbone of the Medical Profession"—the great group enrolled under the caption of *GENERAL PRACTITIONERS*. It is this array which sees first ninety-five per cent of all cases of skin or other lesions. A correct diagnosis and a complete understanding of the pathology of any disease by these men would alleviate immeasurably the sufferings of humanity, would push back by years the inexorable closing of the doors of life, and would make the work of the operating specialist infinitely more easy and startlingly more successful.

If the book under review be a type of the whole group of monographs, the writer predicts a marked success in the reception accorded the group.

The point which appeals to the casual observer, on a casual survey, is the immense wealth of illustrations throughout the book—roughly, an illustration to a page. Best of all, the illustrations are of the highest class, and demonstrate beautifully both the histology, the pathology, and the gross appearance of the various lesions under discussion.

If one were to offer any criticism it would be upon the absence of any distinct paragraphs dealing with treatment. A careful review, however, shows constantly through the pages suggestions or implications which, without thrusting therapeutics at the reader, give by way of allusion or narrative a key to the treatment of lesions of various types.

With the immense strides made in the study of malignancies in the past five years, this book is presented to the profession at a psychologic moment. It deals largely with malignancies of the skin, or of the covering of the skeleton. Emphasis is placed, as said before, upon the pathology and the pathogenesis, with an occasional illuminating allusion to therapeutic measures or to remedial applications.

The author's diction is excellent, his style pleasing, and his flow of thought and language particularly smooth and attractive.

The book can be commended in the highest measure for the great group alluded to in the opening paragraph of this criticism.

As for the operating and diagnosing specialists, it is not too much to say that even their vision may be vastly enlarged and their scope of acquaintance greatly broadened by a careful study and a thorough reading of this admirable monograph.

SPORADIC SEPTIC SORE THROAT

According to Isadore Pilot and David J. Davis, Chicago, sporadic sore throat most often is due to hemolytic streptococci; the streptococci in 10 per cent of the cases observed by them corresponded in their cultural characteristics to the *Streptococcus epidemicus* of epidemic septic sore throat. Septic sore throat due to *Streptococcus epidemicus* in its usual form is sporadic. The epidemic type is unusual, requiring the development of a streptococcus mastitis in the cow whose milk becomes the source of the epidemic. A carrier state for *Streptococcus epidemicus* may follow sporadic sore throat. Such carriers are probably responsible for the direct transmission of sore throat. The streptococci reside in the crypts of the tonsils; tonsillectomy is followed by their disappearance from the throat. In its clinical manifestation, sporadic sore throat due to *Streptococcus epidemicus* varies from very mild to severe types. Patients devoid of tonsils may be affected and may give symptoms of an infection of the upper respiratory tract, in some ways resembling influenza. Complications may arise immediately, such as otitis media, mastoiditis and cervical adenitis; sequelæ may develop from ten to thirty or more days after the onset. Acute polyarthritis, endocarditis, glomerulonephritis and erythema nodosum were the most noteworthy and were often associated with mild recrudescent sore throat and fever. The complications and sequelæ in the cases observed by the authors were due to *Streptococcus epidemicus*. The appearance and disappearance of these organisms in the throat frequently could be demonstrated with the development and termination of the complications. *Streptococcus epidemicus* constitute probably a group among the hemolytic streptococci. Its capsule and large colony formation appears to be identified with an aggressiveness greater than that of ordinary hemolytic streptococci and with a peculiar tendency to cause fatal peritonitis and meningitis. Its exact status remains unsettled. *Streptococcus epidemicus* produces toxin which gives skin reactions in man specifically different from toxin of streptococci of scarlet fever. Injected into animals, the toxin leads to the formation of an antiserum with neutralizing properties.—*Journal A. M. A.*

RECOGNITION OF CANCER OF UTERUS IN ITS EARLIER STAGES

Fred Emmert, St. Louis, states that the importance of timely recognition and the removal of precancerous lesions in relation to malignant growths of the cervix uteri is generally accepted. Among these precancerous lesions, however, leukoplakia of the cervix has not yet received the widespread attention it deserves. This has been due to a large extent to the fact that leukoplakia easily escapes inspection with the naked eye. Hinselmann has designed an apparatus called the colposcope, which permits of ready detection of even the slightest alterations of the vaginal portion and in a large number of publications he has added extensively to the knowledge and appreciation of the nature and significance of leukoplakias. His contentions have been fully confirmed by a case observed and described by the author, which shows conclusively that the use of the colposcope renders possible the diagnosis of the earliest stage of cancer of the cervix.—*Journal A. M. A.*

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CONTENTS

Carcinoma of the Stomach: Observations on Surgical Treatment. Henry K. Ransom, M.D., and Frederick A. Collier, M.D.....	87	Editorial:	
The Needs of Mentally Handicapped Children in Michigan. Robert H. Haskell, M.D.....	93	The State Dues.....	136
Supplementary Report of Cancer Committee. C. E. Dutches, M.D.....	98	The Wayne County Medical Society.....	137
Tuberculosis in Children and Adolescents. Henry D. Chadwick, M.D.....	109	Taxation.....	137
A New Method of Studying Edema. F. H. Lashmet, M.D.....	114	The Cancer Committee.....	138
Allergic Diseases in Children. Samuel J. Levin, M.D.....	116	The Trend of Populations.....	138
Actinomycosis of the Liver. George G. Rieckhoff, M.D.....	120	A Bit of Ancient Medical History.....	139
Hyperparathyroidism. Nathaniel Gates, M.D.....	121	Medical Economics: The Fallacy of Granting Life Diplomas. J. A. Cameron, M.D.....	143
Famous Men in Medical History: Austin Flint. Francis J. Heringhaus.....	126	Communications.....	144
Michigan's Department of Health. C. C. Slemmons, M.D., Dr.P.H.	133	General News and Announcements.....	144
		Obituary.....	145
		Society Activity.....	146
		Minutes of the Mid-Winter Session of the Council of the Michigan State Medical Society.....	152
		County Societies.....	165
		Woman's Auxiliary.....	170
		The Doctor's Library.....	172

CARCINOMA OF THE STOMACH: OBSERVATIONS ON SURGICAL TREATMENT*

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ANN ARBOR, MICHIGAN

Cancer of the stomach comprises at least one-third of all cancer and, in spite of all our therapeutic efforts, remains the chief single cause of mortality from cancer. Its diagnosis and treatment have shown less advance than that of cancer in nearly every other organ in the body. It has come to be regarded by both physicians and the laity as a nearly hopeless lesion, a feeling that is not without some foundation.

At the present time, operation offers the only hope of cure and the greatest chance of palliation and it is this phase that we wish particularly to discuss.

In the hope of bettering our own results in the treatment of this disease, a study was undertaken of the cases of carcinoma of the stomach that have come under our observation in the University Hospital, during the five year period from 1926 to 1930. During this time our records show 469 patients

were diagnosed as having this disease but because of insufficient data or incomplete study many were excluded, leaving 415 cases that were proven by autopsy, operation or sound clinical evidence to have this lesion. The clinical evidence accepted as positive was a characteristic appearance on roentgen examination, a tumor in the epigastrium with the associated common clinical findings of hematemesis, blood in the stools and achlorhydria. The age and sex incidence are shown in Table I. The great pre-

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ponderance of men over women as compared with other statistical studies cannot be explained. The ratio of men to women in our clinic has changed definitely during the past ten years with a constant increase in the relative number of males. In such a small series it cannot be considered to be of any significance. The age incidence is usual, showing that the largest number fall into the cancer age from forty to seventy, but since 10 per cent fall below this age group, it must be considered as a distinct possibility after the age of twenty.

TABLE I
SEX INCIDENCE

	Per cent
Male	84.5
Female	15.5
AGE INCIDENCE	
21-30	1.8
31-40	8.2
41-50	22.3
51-60	29.1
61-70	27.7
71-80	10.0
81-90 .....	.9
	100.0
Youngest patient.....	21 years old
Oldest patient.....	82 years old
Average age.....	56.1 years

The usual textbook picture of a patient with carcinoma of the stomach is that of a patient who will live at the most a few weeks and is a matter that has ceased to be of vital interest to either physician or patient. The initial symptoms complained of by the patients are shown in Table II, and are chiefly remarkable because of their number and variability.

TABLE II
INITIAL SYMPTOMS

	Per cent
Epigastric pain.....	25.9
Anorexia	10.5
Pain and gas.....	10.0
Pain and weakness.....	10.0
Weakness	10.0
Pain and vomiting.....	9.5
Nausea and vomiting.....	4.5
"Stomach trouble".....	3.6
Dyspepsia	3.2
Gas	2.7
Abdominal distention and dyspnea.....	2.3
Nausea and dizziness.....	1.4
Vomiting of blood.....	1.4
Dysphagia	1.4
Pain and tumor.....	0.9
Pain and diarrhea.....	0.9
Loss of weight.....	0.9
Vomiting and weakness.....	0.5
Fainting and pain.....	0.4
	100.0

To be sure, the majority of patients have as a first symptom some discomfort in the

epigastrium or a minor change in digestion, usually, however, of so slight a nature as to be ignored and not without reason when one knows of the common prevalence of such symptoms, due most often to lesions other than cancer. To make the early diagnostic difficulty worse, we note that nearly 30 per cent of the patients have general symptoms such as weakness, loss of appetite, anemia, gas or distention that are not suggestive to the patient of any lesion of the stomach. One may say that the characteristic of the symptoms of carcinoma of the stomach is that they are not characteristic.

TABLE III
ANALYSIS OF SIGNS AND SYMPTOMS

	Per cent
Epigastric pain	
Present	80.5
Absent	19.5
Vomiting	
Present	66.7
Absent	33.3
Weight loss	
Present	95.9
Absent	4.1
Abdominal tumor	
Present	59.5
Absent	40.5
Vomiting blood	
Present	20.0
Absent	80.0
Tarry stools	
Present	32.7
Absent	67.3

Table III represents a tabulation of the signs and symptoms commonly ascribed to gastric cancer. Here again we note the vague complaint of loss of weight as a symptom common to the greatest number of cases, with epigastric pain coming second, and vomiting third. Vomiting of blood and tarry stools occurred in the minority of cases and would not seem to be symptoms of great diagnostic import. It is an interesting observation to find a palpable mass present in so many as 59 per cent of the cases. This merely emphasizes the observation that in most cases the disease is well advanced when the patient first applies for surgical aid.

DIAGNOSIS

As mentioned above, to wait for the textbook picture to appear before making the diagnosis is to wait until the stage of curability has long since been passed. In order to better our surgical results, all mild symptoms referable to the gastrointestinal tract, particularly where there has been any change in previous digestive habit, especially in middle aged and elderly persons, must be

regarded with suspicion and an active effort made to exclude malignancy as the cause. Particularly in those patients who have had digestive disturbances over a period of years, should any slight change in the character of the symptoms be looked upon with alarm. Such a patient may be known to have had a peptic ulcer, cholecystitis or gastric neurosis, which facts may easily blind us to the recognition of cancer symptoms.

Of the diagnostic methods available at present, none in our opinion is comparable to X-ray fluoroscopy and the film examination. Hence in all fairness to the patient, these cancer suspects should be given a thorough roentgenological examination which should then be repeated at frequent intervals if still indeterminate. Here also we must consider the problem of the treatment of gastric ulcer, more especially the smaller ulcers. It is these ulcers which are the most puzzling to the roentgenologist and they form a group in which it is oftentimes actually impossible to differentiate between malignancy and benignity. It is at once apparent the injustice which will be done such a patient, possibly harboring cancer, to permit him to continue for an indefinite time on a medical regime. We are in accord with the principles adopted in the Lahey Clinic in the management of such cases, *i.e.*, a trial of three weeks on dietetic treatment under careful hospital regulation. If, at the end of that time, checkup X-ray examination does not show definite evidence of morphological change, such as a more shallow crater or narrower diameter of the defect, the diagnosis of cancer must be assumed and surgery resorted to.

ULCER AND CANCER

In the University Hospital several years ago the question of the frequency of cancer developing upon gastric ulcer was studied from the clinical standpoint by Cabot and Adie. Of fifty-six cases seen in the clinic from 1916 to 1925 and in which the whole specimen was available for pathological examination, five were found to show clear evidence of having developed on a chronic ulcer, giving a percentage of 8.9.

A small amount of additional evidence on this point may be obtained from our present study by analyzing the pathological reports from the specimens removed in the series of resections. According to the criteria used

by Drs. Warthin and Weller, which are the same as in the cases quoted above, in our fifty-six resection cases, six showed evidence of having developed upon a pre-existing ulcer. This gives a percentage of 10.7, a figure slightly higher than those given by Cabot and Adie. Whether this figure would be increased or decreased had we pathological examinations on all of the ninety-four operable cases, cannot be told. At any rate, the number of cases seems too small from which to draw any very valid conclusions.

It should be pointed out that these figures represent the proportion of cases of cancer which developed upon a pre-existing ulcer and the same figures should not be taken to apply to the proportion of all gastric ulcer cases which ultimately develop cancer.

X-RAY ACCURACY

Of the 94 cases subjected to gastric resection or gastroenterostomy, which will later be discussed in detail, an attempt was made to correlate the X-ray diagnoses made before operation with the operative findings. In forty-seven, or exactly 50 per cent, the roentgenologist gave a very accurate report of the size and location of the lesion and made a positive diagnosis of cancer. In fifteen, the diagnosis of gastric neoplasm was made and in three the films showed a rather characteristic filling defect. Therefore in sixty-five cases, or 70 per cent, the X-ray findings, regardless of all other evidence, gave the diagnosis. To this must be added the two cases reported as having "a non-malignant lesion" and one with "an obstructing surgical lesion" and three in which roentgenological examination showed very high grade pyloric obstruction with much gastric retention, thereby making a complete examination impossible. Thus seventy-one cases or 76 per cent had X-ray findings either so positive or so highly suspicious as to warrant operation. Of the remaining cases, a diagnosis of ulcer was made as follows: "Gastric ulcer with subacute perforation," three; "gastric ulcer," six; "duodenal ulcer," 5. In these cases the decision for operation was made from clinical evidence plus the X-ray. In five cases no X-ray examination was made. For the most part these were patients who had almost complete pyloric obstruction such as to make early operation imperative regardless of the

causative factor. In one case the examination was unsatisfactory while in the remaining three the diagnosis was indeterminate. Hence, in only 3.1 per cent of the cases did the X-ray fail to give at least a clue to the correct diagnosis.

TREATMENT

Table IV shows the fate of the 415 patients positively diagnosed as having cancer of the stomach. It will be noted that 223, or 54 per cent, were obviously far advanced when seen and for whom no operation, even palliative in character, could be expected to succeed. The thirty-five who refused operation or who went elsewhere for surgical treatment were in our judgment operable but for the present study must be dismissed from further consideration due to lack of adequate information. The forty-nine patients subjected to exploration only were regarded as borderline cases in which the bare hope of palliation by operation was held. This group, comprising 11.6 per cent of the entire number of cases, must be added to the 54 per cent just mentioned, thus actually raising the total number of hopeless cases to 65.6 per cent.

TABLE IV

	Number	Per cent
Total number of patients with gastric cancer	415	100.0
Refused operation or operated on elsewhere	35	8.4
Exploration only	49	11.6
Gastroenterostomy	38	9.2
Gastric resection	56	13.5
Gastrostomy	10	2.4
Jejunostomy	4	0.9
Operable	192	46.0
Inoperable	223	54.0

The small group of gastrostomies and jejunostomies, amounting to only about 3 per cent, is of no great interest. These were all done in desperate cases and a few weeks of amelioration was all that could be hoped for.

The remaining 22.7 per cent of the 415 cases, *i.e.*, those on whom gastric resection or gastroenterostomy was done, have been subjected to a more searching study. It is obviously in this group that patients showing important relief from palliative operations, or perchance any "cures," will be found. Table V shows the number of postoperative deaths in this group—a total of eighteen patients, or 19.2 per cent. All patients dying before discharge from the hos-

pital were included in these statistics and in explanation of this rather high mortality rate might be mentioned one case who died of coronary thrombosis over two weeks postoperative on the evening before the day set for discharge. Another was a case of acute perforation of a gastric carcinoma with peritonitis who was practically moribund at the time of operation. Two others remained in the hospital for a period of several weeks, suffering from numerous difficulties, none of which could clearly be attributed to the operation. On the whole, the greatest factor contributing to the mortality rate was pneumonia, a fact which can readily be appreciated when one remembers that we are dealing with a group of debilitated, anemic, and usually aged patients, many of whom are suffering from subacute pyloric obstruction with severe dehydration. At the present time we are unable to state whether there is any one anesthetic which is particularly free from objection in this regard, inasmuch as our percentage of pulmonary complications has not seemed to be importantly less with spinal than with the various forms of inhalation anesthesia.

TABLE V

	Number	Per cent
Gastroenterostomies	38	40.4
Gastric resections	56	59.6
	94	100.0
Postoperative deaths		
Gastroenterostomies	5	13.3
Resections	13	23.2
Total	18	19.2

TABLE VI

	Number	Per cent
Patients accounted for	67	71.3
Gastroenterostomies	27	28.7
Resections	40	42.6
Patients not heard from	27	28.7
Gastroenterostomies	11	11.7
Resections	16	17.0

TABLE VII

ANALYSIS OF OPERATIVE RESULTS— GASTROENTEROSTOMIES

	Number Cases	Per cent
Lived		
6 months or less	9	40.9
7-12 months inclusive	9	40.9
13-18 months inclusive	2	9.1
19-24 months inclusive	2	9.1
Patients still living	0	0.
	22	100.0

Average length of life—8.6 months

Concerning those seventy-six patients who were discharged from the hospital alive, a questionnaire was sent out. In-

formation was thus gained as to the present condition of the patient, if still living, or if dead, the date as well as the circumstances of death. From Table VI, it will be seen that data was secured regarding forty-nine patients—twenty-two gastroenterostomies and twenty-seven resections. As might have been expected, all of the gastroenterostomies were dead. Table VII shows the length of life in a statistical way. The longest period after discharge in this group was 22 months, while the shortest was two weeks, with an average period of survival of 8.6 months.

TABLE VIII
ANALYSIS OF OPERATIVE RESULTS—
GASTRIC RESECTIONS

Lived	Number Cases	Per cent
6 months or less.....	3	11.1
7-12 months inclusive.....	3	11.1
13-18 months inclusive.....	5	18.5
19-24 months inclusive.....	2	7.4
25-30 months inclusive.....	1	3.7
Still living	13	48.2
	27	100.0

Average length of life postoperative of patients dead—13.7 months.

Turning now to Table VIII, we find a similar survey of the patients who had resections. Of this group, thirteen were found to be still living and further mention will be made of them later. Of the patients dead, the longest interval that elapsed after discharge was in the case of one patient who lived 30 months. The shortest postoperative period was three months. The average length of life for the fourteen patients reported as dead was 13.7 months.

TABLE IX
ANALYSIS OF PATIENTS STILL LIVING

No. 1—living at the end of 8 months
No. 2—living at the end of 10 months
No. 3—living at the end of 1 year
No. 4—living at the end of 1 year 1 month
No. 5—living at the end of 1 year 1 month
No. 6—living at the end of 1 year 4 months
No. 7—living at the end of 1 year 7 months
No. 8—living at the end of 1 year 8 months
No. 9—living at the end of 1 year 9 months
No. 10—living at the end of 2 years 3 months
No. 11—living at the end of 2 years 9 months
No. 12—living at the end of 4 years 6 months
No. 13—living at the end of 4 years 7 months

Table IX tabulates the analysis of the patients still living. The last patient mentioned (No. 13), *i.e.*, the one having lived four years and seven months, had what was frankly thought to be a palliative resection. Cancer in the lesser omentum was left be-

hind in the opinion of the operator. Pathological examination of the tissue revealed a far advanced adenocarcinoma. This patient has been seen periodically. His health at the present time is very good and as far as we are aware there is no evidence of a return of his trouble. Patient No. 12 in the chart has now gone four years and six months since operation. This was a case diagnosed clinically as gastric ulcer with roentgenological findings indicating a large gastric ulcer on the lesser curvature which has undergone subacute perforation. Pathologically it was found that a well defined carcinoma was grafted upon a chronic ulcer. This was dealt with by a Polya resection. In response to our questionnaire, this patient presented himself at the clinic for re-examination. He reports excellent health at the present time. He has gained some 20 pounds in weight since operation and is entirely symptom-free. The checkup examination reveals no evidence of a return of his cancer. Since he is nearing the five-year period, this case in all probability is the only one in which we can with any justification presume a cure. However, in a series running over such a short interval of time, any discussion of cures seems entirely out of place.

TABLE X
OPERATIONS BY YEAR

	1926	1927	1928	1929	1930	Total
Gastroenterostomies....	11	11	4	7	5	38
Gastric resections.....	9	10	11	10	16	56

MORTALITY

Gastroenterostomies....	1	2	0	1	1	5
Gastric resections.....	2	5	4	2	0	13

Table X represents the distribution of the two types of operation under consideration by year. Likewise there is appended a tabulation of the mortality of each operation for the same period. This table shows the trend of our treatment during these few years. Resection has steadily gained in favor while gastroenterostomy has been done less frequently year by year. For this view, it is our opinion that there is ample justification. In addition to the figures just presented we have found that our patients with resections have on the whole experienced a smoother postoperative convalescence than with a simple gastroenterostomy, and, taken year by year, there has been a steadily decreasing postoperative mortality.

The factors which have influenced this decreased mortality have undoubtedly been

several in number. First there is a greater operative experience and consequent speed which has aided in perfecting the technical performance. None the less in importance has been the more intelligent pre- and post-operative treatment. As with thyroid and prostate cases, it is now realized that an adequate period of preparation is just as essential for a satisfactory end-result as is the operation itself. Anemia is combated by transfusion, dehydration by infusion or intravenous administration of fluids, and the deranged blood chemistry corrected by the use of chlorides and glucose. Where pyloric obstruction is marked and there has been much vomiting in consequence, important aid is obtained by repeated gastric lavage. This serves to remove from the stomach the stagnating collection of food and fluids which is being prevented from exit. A flabby dilated stomach is thus given a chance to contract down and its wall to regain its tonus.

On theoretical grounds it seems much more logical to adopt an operation which removes the ulcerated bleeding lesion rather than to be content with a mere sidetracking operation. It would seem, and we believe we have demonstrated to our own satisfaction, that the cachexia and anemia can be more satisfactorily combated with this type of operation. It has been pointed out by Dr. W. J. Mayo as well as other observers that in dealing with cancer, if the primary focus can be removed, the body shows a much greater ability to cope with secondary deposits, and some of our cases who have gone over a period of several years when the operation was known to have effected only an incomplete removal, would tend to bear this out.

The objection may be raised that the twenty-two gastroenterostomies and the twenty-seven resections which have been successfully followed up do not represent similar groups of cases, *i.e.*, that resection was done only in the more favorable cases while the more advanced ones necessarily fell into the gastroenterostomy group. To a certain degree this is true. However, in examining the charts of these patients one is

impressed by the rather marked difference of opinions expressed in the operative notes by the different surgeons by whom the operations were performed. A lesion which would be considered resectable by one, by another would be regarded as a case in which too great danger was involved if subjected to such a radical procedure. Thus allowing for differences in surgical judgment, the two series are more nearly comparable than would seem at first thought.

CONCLUSIONS

1. Over 50 per cent of the cases of carcinoma of the stomach were inoperable when first seen.
2. An additional 11 per cent were found inoperable by surgical exploration.
3. While the early diagnosis of gastric cancer is difficult, thorough X-ray examination at the present time offers the greatest possibility of accuracy.
4. Gastric resection as a palliative operation for cancer of the stomach is regarded as superior to gastroenterostomy for
 - (a) The postoperative period of survival is longer (13.7 months vs. 8.6 months).
 - (b) At the present time the mortality is no higher and the postoperative convalescence smoother.
 - (c) In our followup series the only patients still living were the ones on whom resections were done.
 - (d) Thirteen of the fifty-six resection patients are still living, two of them approaching the five-year period.

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THE NEEDS OF MENTALLY HANDICAPPED CHILDREN IN MICHIGAN*

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Who is a mentally handicapped child in Michigan?

To limit the concept of the mentally handicapped child, so far as this presentation is concerned, to the narrower field of the mentally deficient child and consider only the group of the feeble-minded and the intellectually subnormal would simplify the presentation very materially. If, however, the purpose of this Governor's Conference on Child Health and Protection is to bring out into the open the forces that threaten the welfare of all growing children in Michigan to the end that all known forces to protect the child may be offered a larger number of these children in need, such a delimitation would tend to defeat the purpose of the Conference. We cannot limit this presentation to the group of the mentally deficient child alone. We cannot even include with them merely today's psychotic child and today's epileptic child and consider that we have guaranteed all Michigan's children full enjoyment of their rights in this field. It is trite to mention that the child of today is the adult of tomorrow but certainly the child today that becomes tomorrow a psychotic adult in a state mental hospital must be considered here.

It were delightful if one could assume that the only ones mentally handicapped, child or grown-up, were those who suffered from some frank mental or "nervous" disease. If, however, we are to accept that the highest degree of mental health is "that which permits an individual to realize the greatest success which his capabilities will permit, with a maximum of satisfaction to himself and the social order and a minimum of friction and tension," how differently must we cast our concept of the mentally handicapped child!

Michigan has in its five older state hospitals for the insane 8,541 patients; 840 patients in the new Ypsilanti State Hospital opened only last July; 2,330 patients in the Eloise, Wayne County Hospital; a total of 11,711 patients suffering from mental diseases in hospitals: with a waiting list of 611 patients. Michigan has at its Farm Colony for Epileptics 828 residents with 214 on the waiting list. Michigan has 3,450 feeble-minded at the Michigan Home and

Training School at Lapeer with 948 boys and 273 girls already on its waiting list. At the Wayne County Training School there are an additional 700 mentally defective children.

For too many of these individuals the situation is that of water already over the dam. The volume of the flood that is approaching the dam has only recently been considered. Only within recent years have real factual studies begun to challenge and deny much of what has been described as the romance of the mentally and intellectually handicapped and look to a new statement of challenges. Dr. Pollock, statistician of the New York State Mental Hygiene Commission, has set up for his state expectancy tables, akin to the life expectancy tables of the insurance field, from which to calculate mental morbidity or mortality, should we say too frequently from the point of view of social or personal future effectiveness. Four and one-half persons out of every one hundred born is the projected rate in New York State at which we must expect mentally sick patients to require prolonged residential treatment in public hospitals for the insane. This expectancy table shows that, of all children living today five years of age, 5.4 per cent boys and 5 per cent girls are going to require admission to a public hospital for mental disease before they die. One person out of every twenty-two alive today will in our generation become so mentally diseased as to require entering a state insane hospital. In Michigan today there are in round numbers enrolled in our public schools, up to and including the eighth grade, some 900,000 children. Applying Dr. Pollock's expectancy tables to this group gives us the appalling picture of 45,000 children now attending the grade schools of our state

*This paper was read at the Governor's Conference on Child Health and Protection, Nov. 9 to 11, 1931, Lansing.

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who will be some day so mentally sick as to require state mental hospital treatment.

Admission to a state mental hospital, in and of itself, is no such terrible thing. Alarm characterized the press notices some weeks ago of Dr. Mayo's quotation of figures to show that approximately 45 per cent of all hospital beds in the United States are in nervous and mental hospitals: that the average daily patient population of nervous and mental hospitals is greater than that of all other hospitals combined; that the average daily number of patients in nervous and mental hospitals increased by 26,372 from 1928 to 1929 while that of general hospitals decreased by 5,793; that the average daily percentage of beds occupied is greater in nervous and mental hospitals than in all other hospitals. Our real cause for alarm should rest in the fact that too often mental hospitals are so crowded that patients urgently in need of admission at a time when treatment could be most effective cannot be admitted for lack of room. We must remember, too, that the number of patients in state mental hospitals is no criterion of the number of mentally sick in the community.

In Michigan in the thirty-three months "from July 1, 1929, to April 1, 1931, 23 children below fifteen years of age and 115 children between fifteen and nineteen years of age were admitted to State Hospitals for the Insane, there to live under the same conditions as the adult insane, and to associate with them on the wards. These children were neither epileptic nor feeble-minded. They were grouped as to diagnoses principally into four groups: Dementia-precox, psychopathic personality, manic-depressive and psychoneurosis. The number of psycho-neurotic and manic-depressive cases suggests the hopefulness of treatment, and the number of dementia-precox cases indicates the need of early intense treatment if they are not to deteriorate into permanent custodial cases. In my opinion these children have a right to the education and habit training suited to their ages and types of mental disorder, and their treatment should include an approach as near as possible to the recreational, occupational and educational life of a normal child.

"My idea was a unit in connection with a state hospital which would be equipped to provide suitable education and training for such children. Such a unit would, of

course, be more or less experimental, but I think the need and the material for it exist today within our state hospitals. The number in the hospitals is no criterion as to the actual number of juvenile mental cases needing such care, inasmuch as commitment to a hospital for the adult insane is now considered only as the last resort. I think that this children's unit should limit its patients to children below seventeen years of age, which is the upper age limit for juveniles in Michigan courts." The foregoing is a quotation from a letter by Dr. George F. Inch of the Ypsilanti State Hospital.

Greater cause for alarm is in our inability or unwillingness to coördinate our knowledge of causative forces and of remedial influences to any successfully integrated attack upon the subject. Certain of these mental diseases are due to the organic degenerative changes that are to be expected with increasing age: certain of them are due to degenerative changes that result directly or indirectly from infectious diseases of one sort or another; certain of them are due to degenerative changes resultant from extrinsic intoxications.

The majority of these psychotic states, however, are not the resultant of such more or less unavoidable conditions. They are the result of the failure of the individual to have attained that "adjustment to himself and to the world at large with such a maximum of effectiveness, satisfactions, cheerfulness and socially considerate behavior and the ability to face and accept the realities of life" which is called good mental health or a state of being free from serious mental handicaps. This such serious mental handicap is not something which develops suddenly when the adult breaks with the stock market crash or the youth breaks with some adolescent crisis. Rather it is a serious underlying weakness of self which goes back much farther, back to the days when the individual's character was really made, to the days of infancy and early childhood, when attitudes and responses were being so definitely determined that, unless by some good fortune denied at present to the majority, the nature of this handicap in characterial development can be recognized and remedied, the outcome must be more or less inevitable.

It is not enough to limit ourselves in our consideration of the mentally handicapped child to those who are showing today signs

of actual or even threatening mental disease. Where one form of mental disease, dementia precox, constitutes 35 per cent of all individuals under twenty years of age committed to hospitals for mental disease and because its continued course with no great interference to life makes up about 60 per cent of the population in every mental hospital, it is well for us to recognize such an individual when he presents his first symptoms: it is better to recognize the earlier prodromal tinges when treatment may be more effective, but how much more must we strive to learn the child X who under Y conditions equals D.P.

We must not overlook the increasing influence in this field that the child guidance clinics established by the Children's Fund of Michigan will play, and pray that as more specially trained workers become available their increasing number may increase their sphere of activities.

The same thing is true with the epilepsies. We are not today particularly interested in an epileptic who has reached the stage of characteristic deterioration except that we shall be guaranteed freedom from harm at his hands in the most humane and economic fashion possible. We should be interested in guaranteeing every hopeful epileptic as complete an understanding as is possible: to stop where possible as a result of treatment his attacks and the progress of the epileptic change in his personality; to ameliorate, where cure is not possible, the effects of the disease; to learn that there is perhaps in epilepsy a pre-epileptic state when conditions may yet be hopeful; to recognize that almost one-fourth of all epileptics concern young folks under twenty years of age and remember that many of these individuals are as educable as any other child. And yet in 1929 in our own state 379 children of school age were being definitely excluded from public school because of their attacks during school hours and thus being denied formal education from which they could profit. The demand for better organization around this problem is urgent.

Another group unrecognized in Michigan at present, so far as any official provision is concerned, is the group of individuals suffering from distressing changes of personality following epidemic encephalitis lethargica. This group is said to constitute 10 per cent of all mental diseases in persons under twen-

ty years of age. This is a condition practically unknown ten years ago. No formal recognition of this group with its particular problems has ever been made in Michigan.

There are in the United States estimated to be 10,000,000 handicapped children. Of this number 6,500,000 are estimated to be mentally deficient, of whom 850,000 are definitely feeble-minded and 5,650,000 intellectually subnormal.

The mentally deficient child up to this present White House Conference has been like the poor relation kept in the background when a feast was served but here surely he is invited right up to the table to sit with his natural friends, the physically and otherwise handicapped, on a plane of social equality. He is not played up here as the ineffective, the black sheep, the ne'er-do-well, the menace of society to be scorned by all and pushed beyond the pale where he may be forgotten as quickly as possible. Rather, along with his right to sit at the table with us on occasions like this, his handicap is likewise accepted as a challenge to us to find his aptitudes and his abilities that they may be given the fullest measure of possible development to the end that he may so far as possible become a social asset and not a liability. We have in the past been too largely concerned with what this type of handicapped person could not do or what he did that was objectionable socially rather than what he could be trained to do and how completely acceptable in humble spheres of a decent community he could be trained to become. It is true that there are those who might question some of the terminology of this report, or at least its interpretation, but hasn't that always been so, as with the question of "insanity"? Even the English with all the precision of their Mental Deficiency Act and their Education Act are forced at times to say "Mentally Defective within the meaning of the Education Act" as not being identical with "Mentally Defective within the meaning of the Mental Deficiency Acts."

The White House Conference Committee Report quite properly draws no qualitative distinction between the capacity of the higher grade feeble-minded and the intellectually subnormal or retarded except the one question of social adequacy versus social failure. 15 per cent, roughly, of the population of the United States does not possess a level of intelligence that will exceed a twelve year

mental age. A portion of this group of 15 per cent lack a something which under given situations renders them incapable of complete social adaptation and which requires for them continuing external care, supervision and control: individuals in this group (approximately 2 per cent of the whole) are the socially inadequate mental deficient or the feeble-minded. The larger portion of this 15 per cent group, whose intellectual level will not exceed a twelve year mental age, in the ordinary situation are individuals socially quite adequate and deserve to be classed as only intellectually subnormal or socially adequate mental deficient or perhaps mental retardates.

The most important need for the mentally deficient individual anywhere is his recognition. The idiot and the imbecile raise no difficulty. The higher grade of the feeble-minded or the morons, the mental retardates and the intervening border line group fail ordinarily when exposed to the traditional academic curriculum traditionally presented. Modern differentiated education has provided special programs, special technics of instruction and a sense of understanding by specially prepared instructors of the educational difficulties of the intellectually subnormal that permit the potentially adequate among them to progress in their type of educational achievement quite satisfactorily, without loss of self-respect and without creating in them any unhappy set against the social order. Where the defect in these individuals is not recognized and their special needs not properly provided for and they are held up to educational and other social standards beyond their capacity to understand and respond, we may find even in these same potentially adequate individuals either slumps which prompt them to give up permanently the struggle or rebellion which ingrains in them an unhappy set against the entire educational approach that comes to determine their attitude toward all social approach. It cannot be doubted that society itself, by requiring all children to remain in school until a fixed rather high age without furnishing in too many places a curriculum that is adapted to the needs and possibilities of many of these handicapped children (I am thinking more of individuals 75 to 85 I. Q. than I am of I. Q.'s below 75) is inviting upon itself the burden permanently of too many socially inadequate individuals who,

otherwise handled, might have become quite adequate, self-respecting, self-supporting and law-abiding.

In our state, according to the best figures available, there are sixty-two communities only that recognize, or at any rate furnish, differentiated education for this group of the mentally deficient. These sixty-two communities enroll a total attendance in such special classes of 7,930 mentally deficient children under the instruction of 363 teachers. This number of 7,930 mentally defective children represents approximately only 0.9 per cent of the total enrollment in all school districts of the state of children in the kindergarten and the first eight grades.

The blessing that these classes are is not appreciated too frequently by either the family of the child entitled to receive the benefit of them or the interested taxpayer. One wonders whether state-wide propaganda backed by some interested lobby in the way the Rotary Club has backed the crippled child might not popularize this work. It is a fact that a rather thorough search through the last three biennial reports of the State Superintendent of Public Instruction reveals absolutely no mention of the entire subject of special education for mentally retarded children beyond one line in the quotation from the synopsis of the special-class teacher-training program given by Dr. Elliott at the Michigan Normal College. This statement must not be misunderstood. The State Department of Public Instruction has done excellent work in providing the local school systems inspiration and assistance in their opportunity rooms for mentally defective children. Some of its publications by Berry and Elliott are perhaps classic. Yet the silence of the Annual Report on the subject gives an almost clandestine tinge to the work. The reason for this, of course, is obvious.

The mentally deficient in this state, like the mentally sick, have no friend at court. Propagandists have advanced the cause of the blind, the deaf, and the crippled. State aid is available for any community providing acceptable special class instruction for the deaf and the hard of hearing, the blind and the partially sighted, the orthopedic cripple and some others up to two hundred dollars per child over and above the cost of instruction in the regular grades. What legitimate reason, except the absence of

zealous propaganda, for the absence of similar state aid for their brother, the mentally handicapped child? Wider recognition and earlier treatment, in this case a socio-educational approach in the school and home, would prevent many a long residence in a state institution, corrective, penal or mental, and cost much less.

I haven't mentioned institutions for the feeble-minded. We need them. At the rate of one bed in feeble-minded institutions for each thousand of population Michigan requires today approximately 4,500 beds. Lapeer now has a population of 3,400 patients with approximately 700 mentally retarded children in the Wayne County Training School at Northville. Massachusetts actually provides at a rate of 1.2 beds per one thousand population. Massachusetts has a troublesome waiting list. Lapeer has a waiting list of over a thousand.

Michigan needs another institution for the feeble-minded. This additional institution should have had its planning started about ten years ago. Certainly the present institution at Lapeer should not be increased beyond its present colossal size.

I may have said little directly about the needs of the mentally handicapped child in Michigan. His needs are few in principle. Once these few needs in principle are satisfied, great will be the benefits that will just naturally well up to his advantage.

He needs worst, perhaps, the recognition of the universality of most of his problems with those of every other growing child—this would be guaranteed by a modern Children's Code.

He needs recognition of the increased demands for a fuller mental hygiene program: the price we pay for our rapid growth, our increasing urbanization, our industrial automatization—this would be guaranteed by a professionally spirited state mental hygiene department comparable to our State Department of Health.

He needs fuller statutory recognition of his educational problems as a state educational program.

With modern mental hygiene, modern child welfare and modern special educational programs in effect, I can see every detail of his needs just naturally follow; from each mental institution specially prepared diagnostic and consulting groups available for every city, town and village not large enough to provide these facilities so common in our

larger centers: every school superintendent required by law to notify the central mental hygiene department of every child in his system two or three or more years retarded for class age that the child may have the benefit of examination by these ambulant diagnostic groups: legislation to require the establishment of special classes for mentally handicapped children whenever in any school district ten or more or some other number are found so mentally deficient that they cannot profit from the traditional curriculum: changes in the law to insure that the responsibility residing in the state for those mentally handicapped children with continuing handicaps shall be recognized to exist whether the child is residing in a state institution or not: local development of greater interest in and more sympathetic understanding of the mentally handicapped child in his own community as a community problem, with the development of local committees to assist in devising new ways for his occupation at the end of his differentiated educational training, perhaps with subsidized workshops akin to the workshops of the League for the Handicapped.

With such a program the Mentally Handicapped Child in Michigan could be said truthfully to have attained his share of the claims of the White House Conference Bill of Rights that

The handicapped child has a right:

1. To as vigorous a body as human skill can give him.

2. To an education so adapted to his handicap that he can be economically independent and have the chance for the fullest life of which he is capable.

3. To be brought up and educated by those who understand the nature of the burden he has to bear and who consider it a privilege to help him to bear it.

4. To grow up in a world which does not set him apart, which looks at him, not with scorn or pity or ridicule—but which welcomes him, exactly as it welcomes every child, which offers him identical privileges and identical responsibilities.

5. To a life on which his handicap casts no shadow, but which is full day by day with those things which make it worth while, with comradeship, love, work, play, laughter, and tears—a life in which these things bring continually increasing growth, richness, release of energies, joy in achievement.

2. Are the following special examinations available in your county?

- (a) Sigmoidoscopic.
- (b) Cystoscopic.
- (c) Broncho- and esophagoscopic.
- (d) Retinoscopic, laryngoscopic, intranasal, etc.

Remarks:

ing either separately or as part of the organization of a general hospital?

Remarks:

5. Are all of above facilities available to patients of limited or no means? If not, what facilities are available to such patients?

Remarks:



Map No. 2.

3. (a) Has your county an expert tissue diagnostic laboratory?

- (b) Are there facilities for frozen section diagnosis?

Remarks:

4. (a) Is there any cancer research institute?
- (b) Is there any cancer or tumor hospital?
- (c) Is there any cancer or tumor registry?
- (d) Is there any permanent cancer clinic operat-

TREATMENT

1. Is expert cancer surgery, both general and in special fields, available to patients of all classes in your county?

Remarks:

2. Is there a deep therapy plant in your county? What is its maximum voltage?

Remarks:

3. Is there any radium owned in your county? If so, how much is owned by any individuals or organized groups, i.e., how much is available for the treatment of any individual patient?
Remarks:
4. Is there any radium emanation plant?
Remarks:
5. Are local practitioners giving treatment with rented radium or emanation?
Remarks:

The series of state maps which are reproduced herewith were exhibited in a booth in the Scientific Exhibit at the recent state meeting in Pontiac. Our exhibit also displayed maps and charts showing the mortality from cancer in Michigan, prepared by the Michigan Department of Health. Charts



Map No. 3.

6. Is there an institution for the care of incurable cancer patients? If so, is it open to patients without means?
Remarks:
7. Is provision made for obtaining and recording follow-up information on all cancer patients from time of diagnosis to death or five year cure?
Remarks:

showing cancer deaths by age and sex groups in Detroit in 1930, prepared by the Division of Cancer Control of the Detroit Department of Health, were also shown.

In addition to conducting this survey the committee has also assisted various county societies in securing speakers and motion

picture films for cancer programs. It is prepared to do this for any society on request, and every county society is urged to have at least one cancer program each year.

RESULT OF SURVEY

This information is based on replies re-

In no case was an affirmative statement of facilities question or changed.
Map No. 1 shows counties reporting a well equipped X-ray organization prepared to do gastro-intestinal studies, interpret bone lesions, etc.



Map No. 4.

ceived from the county secretaries, and statements of facilities must be taken as their judgment rather than that of this committee. In a few instances, when additional information indicated that local facilities were better than reported by the secretary, such correction was made in the maps.

It is obvious that the value of all X-ray diagnosis is dependent upon the technical skill and clinical judgment of the roentgenologist. We are inclined to interpret this map as showing the location of diagnostic X-ray equipment. The experience and skill of the roentgenologists can be best appraised

during operation requires proximity of laboratory and operating room.

Map No. 4 shows counties reporting expert cancer surgery, both general and in special fields. By comparing this with Map No. 3 it will be seen that, in some counties, com-

Map No. 5 shows counties reporting facilities for deep roentgen therapy. This map shows similarity to Map No. 3 in the lack of facilities except in the southern half of the lower peninsula. The wide application of this agent in leading clinics, and the re-



Map No. 6.

petent surgeons are handicapped by lack of frozen section diagnosis. To be sure, many cases can be perfectly well handled without frozen section work. However, a wider distribution of laboratory aids would be of great value to local surgeons.

sults of such treatment, leave no room for doubt as to the great value of such facilities in treating many forms of malignancy. In addition to the obvious need for expert knowledge of this powerful agent, best results are dependent on certain requirements

cancer surgery which must otherwise be neglected. Although radon may be secured from distant sources, the fact remains that its extensive and effective use has been developed only in cancer centers having such a plant.

dependent on ownership of the agent; it is, however, dependent on an adequate amount and its expert application. Access to radium or radon does not assure good radiation therapy any more than access to a knife assures good surgery. Rented radium and



Map No. 8.

Map No. 7 shows counties reporting use of rented radium by local practitioners. The net results of this practice, which is prevalent in various localities throughout the state, seem of rather dubious value. To be sure, the effectiveness of radiation therapy is not

emanation are no doubt much used in palliative treatment of hopeless conditions, which may be entirely unobjectionable. Two important results of ineffective or disastrous radiation are first the loss of precious time in cases having some chance of cure, and,

second, the adverse publicity which unfairly discredits this agent in any community.

Map No. 8 shows counties reporting cancer follow-up work. Follow-up activities may vary all the way from the attempt of a few men to follow their own cases, un-

of follow-up work. The value of follow-up information in cancer work is very great. In no other way can we learn the fate of any group of cancer cases or the value of any form of treatment. Everyone connected with cancer cases, the family physician, the



Map No. 9.

aided, to the operation of a central registry where practically all cases are registered and are then followed until death or five-year cure by the registry. The sporadic interest which a few men may take in the occasional case can scarcely be dignified by the name

surgeon, the roentgenologist, and the pathologist, can learn from this information; and to attain the degree of proficiency which the patient can expect of them, they must learn by just such means.

Map No. 9 shows counties reporting a

permanent cancer clinic operating either separately or as part of a general hospital. The benefits of a regular meeting of men interested in cancer work seem obvious. Such an arrangement multiplies the number of cases which each member of the group sees,

fairly adequate facilities and personnel for complete diagnostic and therapeutic service to cancer patients. This should not be interpreted as showing the only places where any cancer cases can be properly handled. Many cases can be promptly diagnosed and



Map No. 10.

enabling him to learn much more about cancer. It has the further advantage of frank discussion of cases, which is educational to the physician and in the best interests of the patient.

Map No. 10 shows counties reporting

properly treated without all of the facilities available in these four counties; however, a great many cases will suffer if denied the facilities and skill which, at present, seem available in only four counties. Furthermore, it should not be assumed that these

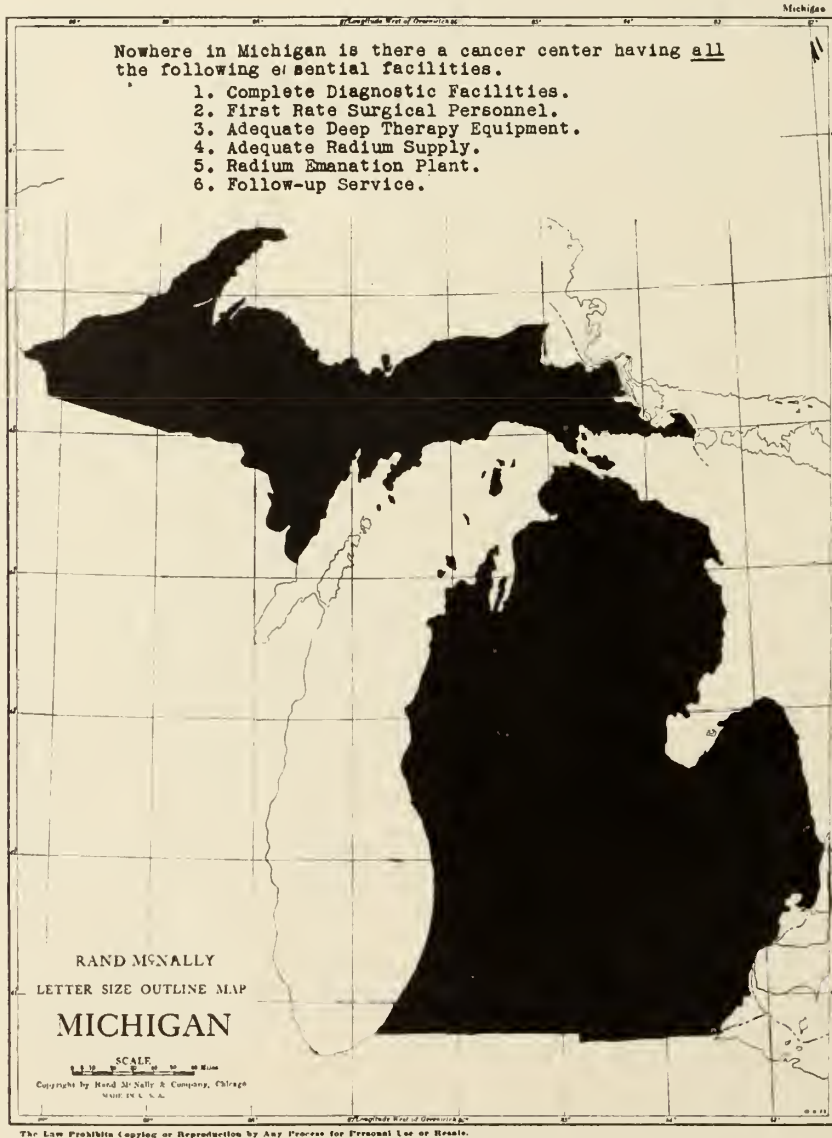
counties have *all* the facilities and skill which should be available there.

Map No. 11 is merely a graphic representation of the fact that the large, populous, and prosperous state of Michigan has not

6. Follow-up service.

CONCLUSIONS

This survey was undertaken as the first activity which our committee should logical-



Map No. 11.

yet developed a single cancer center having *all* of the following essential facilities:

1. Complete diagnostic facilities.
2. First rate surgical personnel.
3. Adequate deep therapy equipment.
4. Adequate radium supply.
5. Radium emanation plant.

ly pursue. A clear understanding of our problem seemed of primary and vital importance. This report is not published with the idea of depreciating the facilities for cancer work in this state or in any parts of it, but rather to broadcast knowledge of the situation as revealed by our survey.

TUBERCULOSIS IN CHILDREN AND ADOLESCENTS*

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How many physicians if asked to name the common communicable diseases of children would include tuberculosis in the list? You would mention diphtheria, scarlet fever, measles, whooping cough, mumps and chickenpox, but few would think that tuberculosis belonged in that group. A look at the mortality statistics, however, will demonstrate the fact that tuberculosis stands near the head of the column for all ages under fifteen, and when we include with the young children the adolescents under twenty, it leads the whole list by a wide margin.

TABLE 1A
DEATHS FROM CHILDREN'S DISEASES IN MICHIGAN, 1930
AGES UNDER 5

	1930	1929	1928	Total 3 years
Tuberculosis	162	182	178	522
Diphtheria	122	211	175	508
Measles	186	111	253	550
Whooping cough	171	250	212	633
Scarlet fever.....	53	72	90	215

TABLE 1B
DEATHS FROM CHILDREN'S DISEASES IN MICHIGAN, 1930
AGES UNDER 15

	1930	1929	1928	Total 3 years
Tuberculosis	288	339	313	940
Diphtheria	261	449	339	1049
Measles	217	139	288	644
Whooping cough	176	255	218	649
Scarlet fever.....	111	114	152	377

TABLE 1C
DEATHS FROM CHILDREN'S DISEASES IN MICHIGAN, 1930
AGES UNDER 20

	1930	1929	1928	Total 3 years
Tuberculosis	524	614	613	1751
Diphtheria	270	459	345	1074
Measles	221	143	293	657
Whooping cough	176	255	218	649
Scarlet fever.....	110	114	152	376

With the children under five, sometimes diphtheria, measles or whooping cough cause more deaths in a single year when epidemics occur, but, as the table shows, tuberculosis causes a high mortality year after year. It is pandemic. It lives with us in an unobtrusive way all the time. Because it is not dramatic, we underestimate its ravages until at the end of the year the bureau of vital statistics casts up the account, and we find that as usual tuberculosis has taken a heavy toll. This conclusive evidence should fix the attention of physicians on tuberculosis as one of the most serious of the infectious diseases of childhood.

*Read at the meeting of the Michigan State Medical Society, Pontiac, September 24, 1931.

There are three distinct periods in the life of a child when there is a marked difference in their resistance to tuberculosis as shown by the death rate.

The graphic view of the tuberculosis mortality by age shows two peaks, one for those under five, the other after age ten. The valley between these peaks represents a comparatively immune period in the lives of children. For children under five the death rate is 32.9. From five to nine it drops to 10.2. It is 16.1 from ten to fourteen, and at age fifteen to nineteen it sharply rises to 71.8 and continues its ascent to 120.3 at twenty to twenty-four. This high rate is then not exceeded until after age sixty-five. These figures show that young children are very susceptible to tuberculosis. During the second five year period, however, they acquire some degree of immunity which enables them to resist tuberculous infection to a considerable extent, as the death rate is only one-third as high as in the group under five.

This comparative freedom from fatal tuberculosis is difficult to explain, as we know from experience that the per cent of children infected with tubercle bacilli increases with each year of life. Something happens during these years that hinders the development and spread of tubercle in the child's body. Unfortunately, this favorable condition does not last.

As the age of adolescence approaches, the death rate rapidly rises. The something that held in check the spread of tubercle is missing. We speak of this unknown factor as resistance. Why it is relatively high between the ages of five to ten and lacking in infancy and adolescence, we do not know.

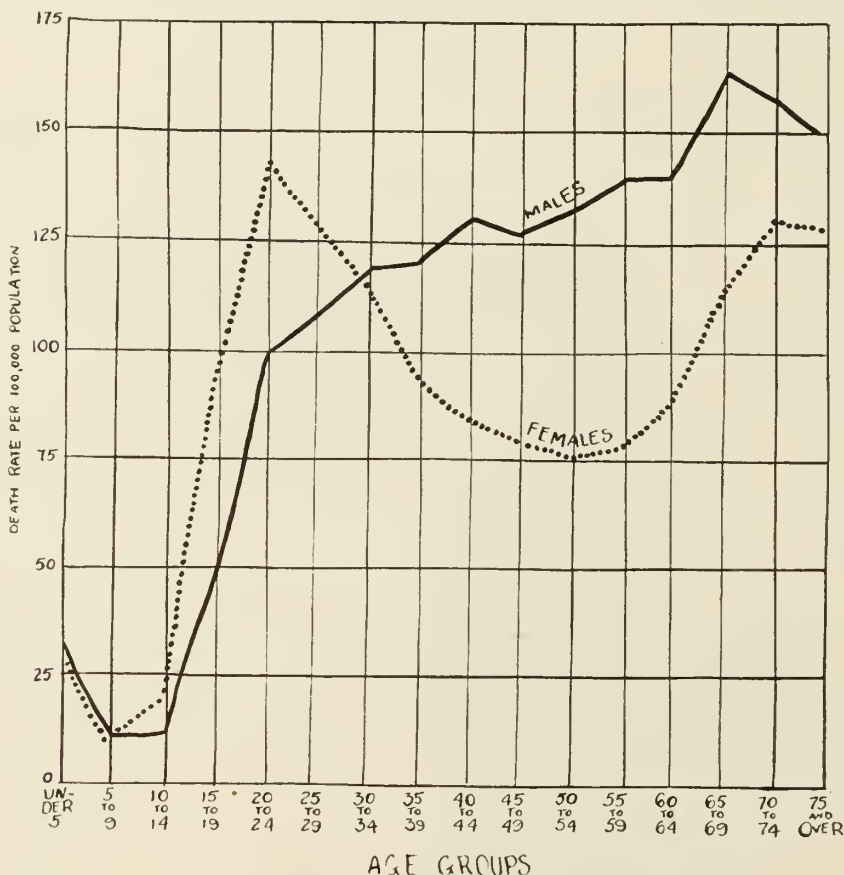
Early diagnosis of pulmonary tuberculosis is important, but this is peculiarly difficult

in children. When the tubercle bacillus is implanted in the pulmonary tissue, tubercles form, and about this focus there is a varying amount of inflammation. This perifocal reaction to the presence of tubercle may be small in area or involve the whole lobe. If

name of childhood type of tuberculosis.

In the evolution of tubercle, the center becomes caseous, and in this calcium is deposited. Fibrous tissue forms a capsule about the tuberculous nodule as healing takes place. It tends to run a benign course if

CHART I
TUBERCULOSIS DEATH RATES BY SEX AND AGE
UNITED STATES REGISTRATION AREA—1927



the latter, we have a lobar pneumonia of tuberculous origin. Such gross lesions are occasionally found in infants, more often in those of the colored race. To a lesser degree we find this condition up to five years, but seldom after that age.

Coincidentally with the development of tubercle in the lung parenchyma, tubercle bacilli are carried by the lymph stream to the tracheobronchial lymph nodes draining that area. Tuberculosis, therefore, in this primary stage involves both the lung parenchyma and the tracheobronchial lymph nodes. This is really the incipient stage of tuberculosis, which we now designate by the

further infection is prevented. When a child is exposed to further infection, or a spread occurs from its own primary focus, the disease resulting therefrom localizes in the pulmonary parenchyma and does not again involve the tracheobronchial nodes.

This is the adult type of tuberculosis which tends to become progressive, and in persons under twenty has a very high mortality. It is rarely found in young children, but as puberty approaches this form of disease is more commonly met with, and the percentage steadily increases with age up to about twenty-five years. The examination of many school children shows that the in-

cidence of this type of disease is about one in three thousand elementary grade pupils and one in 460 high school students. The roentgen examination of 2,700 college students showed the same percentage as among the high school group.

DIFFICULTIES IN DIAGNOSIS

The diagnostic criteria by which physicians determine the presence of tuberculosis in adults will not hold good for children. Râles are seldom found in the childhood type of disease. Impaired resonance is only present in gross lesions, and these cases are few. Therefore, auscultation and percussion are of little value in determining the presence or absence of tuberculosis in children. We are called upon to make a diagnosis in children when there are no characteristic symptoms and no physical signs. Fortunately, procedures are available by which this can be done. They are the use of the tuberculin test and roentgen examinations.

TUBERCULIN TEST

This is a very valuable aid, as by its use we can determine the presence of tuberculous infection. Its use should not be restricted to young children. It is of great value in adolescence, as infection in this country is far from universal. In high school and college students we find from 40 to 50 per cent of positive reactors. Indeed, in adults it is often helpful in clearing up a difficult problem in diagnosis, as when repeated tests are negative we can eliminate tuberculosis from further consideration.

The Pirquet, or cutaneous test, is equivalent to .01 mg. of tuberculin used by the Mantoux, or intracutaneous, method. The Pirquet test has some advantages to a physician doing an occasional test, as full strength old tuberculin is used, and this keeps its potency indefinitely. With the Mantoux method, dilutions of tuberculin are required. They must be carefully and freshly made and are therefore not always quickly available. This method, however, has this advantage: The amount of tuberculin given can be measured, and if the first dose is negative it can be repeated with a stronger dilution, thereby slightly increasing the percentage of positive reactors. For general use, however, in school clinics I agree with Pope,¹ who states in a recent paper:

"For practical purposes the scarification type of test may be considered equivalent to the intracutaneous test with .01 mg. of old tuberculin. In the series

of Aronson and Zacks at the Fernald School, seventy more children, or 5.1 per cent of the total, reacted to the .01 mg. than to the Pirquet test. Among 2,642 children tested in the Revere schools, only 4 per cent who were negative to the Pirquet test reacted to the first Mantoux test.

"If a single Mantoux test with .01 mg. or a Pirquet test, followed by roentgenograms of reactors, will pick out 90 per cent of children with significant tuberculous lesions, the use of additional tests means at least doubling the cost of examination to find an additional 10 per cent of cases. In Massachusetts there has been less popular objection to scarification than to any test involving a needle, and a slightly less accurate test which reaches a much larger proportion of the population may well uncover more tuberculosis than a method that is not generally acceptable to the public."

THE ROENTGENOGRAM

The tuberculin test is used as a screen to sift out from the mass the infected children. The roentgenogram is another screen that we use to study the positive reactors to find those that are diseased. We can by these means restrict the roentgen examination to those who react to the tuberculin test and thereby avoid the great expense of taking a film of every child.

SIGNIFICANCE OF THE DIFFERENT TUBERCULOUS LESIONS SEEN IN THE ROENTGENOGRAM

The pneumonic or infiltrated lesions denote a recent infection and the allergic response of the tissues to the presence of the tubercle bacilli. These lesions simulate a bronchopneumonia so much that a correct interpretation of the roentgenogram is impossible unless there are also associated lymph nodes projecting from the hilum or the paratracheal region. Lacking the confirmation supplied by such enlarged nodes, a second film should be taken after an interval of ten days or two weeks. If the condition was due to a non-tuberculous pneumonia, the density will have disappeared. If, however, the exudative infiltration was tuberculous, then no definite change will be noted, as such infiltrations will remain for many months. The clearing gradually takes place from the periphery until a small nodule remains, and in this calcium is slowly deposited. The interval between infiltration and a well calcified nodule is about two years. During the stage of infiltration there is always danger of dissemination of tubercle bacilli through the blood stream to the bones or meninges with serious results. When calcification develops, the encapsulated nodules become less of a hazard, but as they contain living tubercle bacilli they remain

somewhat of a menace well on into adult life.

Zacks² reports "in a study of over 100,000 school children that those with nodular lesions were found in two out of every hundred children, and in a series of 110 children found with the adult type of tuberculosis 66.3 per cent had associated nodular lesions, showing that they had had a previous childhood type of disease. Children with these lesions are twice as prone to develop later the adult type of tuberculosis as was a controlled group that reacted to the tuberculin test but in whom no nodules were found."

He also tabulated the subsequent history of the 110 children who had the adult type of tuberculosis and who have been under observation for about five years. Eighty-seven were classified as having the adult type of pulmonary tuberculosis on the first examination. Twenty-three others were found at subsequent examinations to have developed that disease from among the group first classified as having the nodular or childhood type. The average interval between the finding of the childhood type and the discovery of the adult type was 3.5 years. The ages varied from seven to seventeen years, the average age being 13.5 years. The ratio of boys to girls was one to 2.8. Two out of every three cases were exposed to a known source of infection at home. Bilateral lesions were found in 20 per cent of the boys and 46.9 per cent of the girls. Subapical lesions were observed in 28.3 per cent in the girls and 20.6 per cent in the boys. Associated childhood type lesions were found in 66.3 per cent. The girls presented nine cavities, six of which were below the apex. The boys presented two cavities, and both were in the apex. Seventy-seven per cent of these children were persistently below the standard weight line. That is not so surprising as is the fact that 23 per cent of them were average or above average weight when first found to have tuberculosis.

TABLE II

ADULT TYPE PULMONARY TUBERCULOSIS
BASIS FOR DIAGNOSIS, 110 CHILDREN
AVERAGE AGE, 13.5 YEARS

	Boys	Girls	Total	Per cent
X-ray	15	45	60	54.54
Râles and X-ray.....	5	16	21	19.09
Râles, symptoms and X-ray	7	17	24	21.81
Symptoms and X-ray.....	2	3	5	4.54
	29	81	110	99.98

The above table shows that more than half of the 110 cases of pulmonary tuberculosis in children exhibited no symptoms or signs of the disease. The diagnosis was made entirely from the roentgen examination. That is important to bear in mind, as it shows that early tuberculosis may exist in boys and girls when they appear to be in excellent health.

We are not justified in saying that a boy or girl that reacts positively to the tuberculin test does not have pulmonary tuberculosis because there are no physical signs or symptoms of disease. The group with a history of contact with an open case of tuberculosis will show the highest percentage of cases, but there are many children living in homes with concealed or undiagnosed cases of tuberculosis. Therefore, we cannot put too much dependence on a negative family history.

When râles and symptoms appear, the period most favorable for treatment has passed. Tubercle bacilli in the sputum are rarely found in children except in advanced disease, and such cases usually go on to a fatal termination in spite of treatment.

TABLE III
ADULT TYPE PULMONARY TUBERCULOSIS
RESULTS 4.6 YEARS AFTER DIAGNOSIS

	Number	Dead Per cent	Progressed Per cent	Stable Per cent	Unknown Per cent
Boys	29	10.3	48.2	34.4	6.8
Girls	81	23.4	48.1	22.2	6.1
Total	110	20.0	48.1	25.6	6.3

This table illustrates the gravity of pulmonary tuberculosis in children. The mortality among girls is more than twice that of boys. The average duration of life of those that died was 3.2 years after diagnosis was made. The minimum period was six months and the maximum seven years. Two additional deaths have occurred since the above table was made, and this brings the mortality up to 24 per cent. Forty-eight per cent were progressive, and in only 25 per cent was the lesion as shown by roentgenogram found to be stationary or retrogressive.

To lower this very high mortality, not only must diagnosis be made before symptoms appear but aggressive treatment must

be instituted at once. Treatment should be bed rest combined with pneumothorax or phrenicectomy, depending upon the extent and type of lesion. I think the high mortality shown in these reported cases can be reduced if adequate treatment such as I have mentioned is carried out without delay. No dependence can be placed on gain in weight, normal temperature or lack of symptoms in judging the progress of the disease in these young patients. If kept in bed, they will often put on weight, be afebrile, have good color and feel well for a considerable time, while the disease is steadily progressing. The appearance of the lesion as shown in serial roentgenograms is the best available guide as to the real condition of the patient. These films should be taken frequently and treatment based on what they show, rather than on physical signs and symptoms, which are frequently very misleading.

I wish to acknowledge my indebtedness to Dr. Zacks² of the Massachusetts Department of Health. I have made use of two of his tables and some of the deductions in his study of the 110 cases of pulmonary tuberculosis in children. I was associated with him for five years while these school clinics were being held and made most of the roentgen interpretations upon which the original diagnoses were based.

We have stressed the need of early diagnosis in pulmonary tuberculosis so that prompt and effective treatment would be given. Here is a group of children who have been diagnosed early, but regardless of that at the end of five years 24 per cent are dead and about 50 per cent more are progres-

sive cases. These results are certainly discouraging as far as treatment is concerned.

No tabulations have been made showing what treatment was given in this group of cases. I know that in some instances it was impossible to convince the parents or the family doctor that a child without symptoms or râles in the chest needed to be excluded from school and given rest treatment. The doctor was skeptical of the diagnosis based entirely upon a small infiltration in the lung when the child was robust in appearance, felt well and wanted to go on living a normal life. Delay followed delay, and in the course of time when symptoms and signs were evident the patient was sent to a sanatorium. Then bed rest, more or less complete, was given. It is not enough—collapse therapy, either phrenicectomy or pneumothorax, or both, should be done as soon as the roentgen diagnosis is made, regardless of symptoms or whether râles can be elicited.

Pulmonary tuberculosis in children is of the fulminating type. Its approach is stealthy, its progress rapid. It must be met with more heroic measures than are necessary in adults. We must suspect it in apparently healthy children. We must tuberculin-test them; we must give the reactors a roentgen examination; and when we find one with even small parenchymal infiltrations of the adult type, we must persuade them to give up all else and submit to aggressive treatment.

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THE ADVICE IS GOOD

Some do's and don'ts concerning the subject of threatened malpractice suits are given in a very instructive article in the *New England Journal of Medicine* for April 16, 1931. Among other interesting items we note the following: "A fluoroscope has its place, no doubt, but in diagnosing fracture and discerning apposition there is no substitute for an X-ray. The X-ray is evidence that can be produced. It is concrete. What you saw in the fluoroscope was happening at the time, but it cannot be produced to prove that you got apposition when later the patient removes his cast without your knowledge or does some other act that causes loss of apposition." Here is another timely suggestion: "Please don't criticize, particularly to the patient, the treatment given by some other doctor before

the patient came to you. You see the result, nothing more. You do not know the whole story. You do not know what the original condition was, what the other man encountered in the way of difficulties or whether he had proper coöperation from the patient. Wait until the evidence is all in. You may have to change your mind when you get all the facts. You may be wiser but at least you will know what you are talking about." To this we may add the injunction to be careful about what you say and to whom you say it, for in an unguarded moment you may give to a relative, or even a lawyer, a club that later will be used to beat you, and always remember that there are plenty of people who are trying to get something for nothing and it is easy to attempt to blackmail a physician and force him to pay indemnity for an alleged malpractice.—*Indiana State Medical Journal*.

A NEW METHOD OF STUDYING EDEMA*

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At the present time, the almost universal method of studying the progress of edema is by correlating changes in body weight with the difference in fluid intake and urine output. Not infrequently such data result in a rather paradoxical type of chart as seen in Fig. 1. Here there is a consistent gain in weight. This gain is interpreted as increase of edema, since the patient was assumed to be on only a maintenance diet. If we assume that the gain in edema during Periods I and III was due to fluid intake being greater than urine output, then it is impossible, with the available data, to explain the gain in weight during Period II, when the opposite conditions existed.

In Table I are listed the various possibilities to explain gain in body weight. The word "balance" indicates that intake and output are exactly the same, referring either to water or calories. "Positive Exchange" indicates that intake is greater than output; and "negative exchange" indicates that intake is less than output. These refer again to either water or calories.

After reviewing these possibilities, one can readily understand that considerable more data than merely fluid intake and urine output are necessary for accurately interpreting changes in body weight. Changes in body weight are the resultant of all those factors which are concerned in a complete water and caloric exchange. All sources of water, both into and out of the body, must be considered. Likewise, the amount of calories going into the body and being dissipated by it must be known in order to determine whether body tissue has been gained or lost.

Newburgh and his coworkers of the University Hospital, Ann Arbor, have devised a method by which all these data can be determined. By applying this method the progress of edema can now be studied accurately for the first time.

The most direct approach for the determination of water exchange is by way of the caloric exchange. The body is continually gaining a small amount of weight by the absorption of oxygen during respiration. But this gain is exceeded by the continual loss of carbon dioxide by respiration and water by evaporation. This loss of weight is called the "insensible loss," and is expressed by an equation as equal to the water

vapor lost plus the carbon dioxide lost minus the oxygen absorbed. Table II indicates the manner in which the "insensible loss" is determined. If, for every twenty-four hours period, one adds to the body weight at the

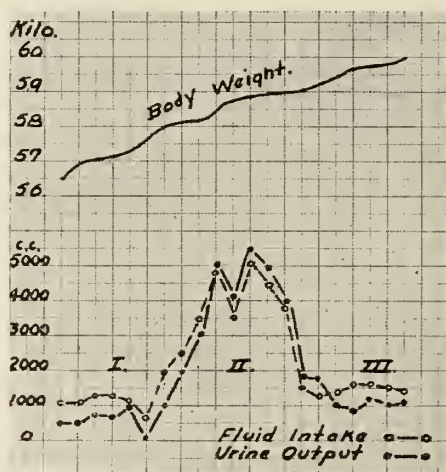


Fig. 1.

beginning of the period the weight of food and water taken during that period, and from this sum subtracts the combined weight of the body at the end of the period, plus the weight of the stool and urine lost, the difference is the "insensible loss" for twenty-four hours. The carbon dioxide-oxygen difference can be determined as described by Newburgh. Having then only one unknown in the equation, the amount of water vapor lost is easily determined.

In order to evaporate 1 gram of water, 0.58 calories of heat are required. Thus it is easy to calculate how much heat is lost from the body by water evaporation. Newburgh and others have shown that the amount of heat thus lost constitutes 24% of the total heat lost by the body every

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twenty-four hours. Thus the total heat requirement of the body can be determined. Knowing the heat requirement, the total nitrogen excretion and the carbohydrate of

course, the opposite will take place if the body stores protein or fat. The amount of preformed water is found by multiplying the amount of protein or fat by the factor

Water Balance	Tissue Gain
I. Pos. Caloric Exchange	
Pos. Water Exchange	Edema Gain.
II. Caloric Balance	
Pos. Water Exchange	Tissue Plus
III. Pos. Caloric Exchange	Edema Gain.
Pos. Water Exchange	Edema Gain >
IV. Neg. Caloric Exchange	Tissue Loss.
Neg. Water Exchange	Tissue Gain >
V. Pos. Caloric Exchange	Edema Loss.

Table 1.

the diet, one can determine the exact amounts of protein, fat, and carbohydrate burned in the body. This is called the metabolic mixture. By comparing the metabolic mixture with the contents of the diet one can determine the amounts and kinds of body tissue either stored or burned.

Table III indicates the sources of water, in and out, which must be considered. The amount of water in the drink and food is easily determined by weighing them as prepared, completely drying, and determining the amount of water lost by evaporation.

When a candle burns, a definite amount of carbon dioxide and water is formed in the chemical reaction of oxidation. Likewise, when protein, fat, and glucose are burned in the body the same oxidation takes place, and water is formed. This water becomes as available to the body as the water taken as drink, and must be considered as such. This is called the water of oxidation, and is determined by multiplying the amount of protein, fat, or carbohydrate burned by the factor indicated in Table III.

If the patient is not receiving enough food to meet the body requirements, body protein and fat must be burned. In the burning of these tissues, water of oxidation is likewise formed. In addition, there is a certain amount of water held by protein and fat in the physical state of adsorption. When the tissue is burned, this additional water is freed, becomes available to the body and is called the "preformed water." Of

Insensible Loss = Water Vapor + (CO₂ - O₂)	
24 Hour Period	
8⁰⁰ AM -----> 8⁰⁰ AM	
Body Weight	Body Weight
+ Food	+ Urine
+ Water	+ Stool
minus	
"	
Insensible Loss.	

Table 2.

WATER IN	WATER OUT
1. Drink	1. Urine
2. Food	2. Stool
3. Oxidation:	3. Water Vapor:
Protein x 0.41	Lungs.
Fat — x 1.07	Skin.
Carbohydrate x 0.60	
4. Preformed:	
Protein x 3.0	
Fat — x 0.1	

Table 3.

indicated in Table III.

The water of the urine and stool is determined in the same way as for food, i.e., by drying. The determination of the amount of water lost by evaporation has already been explained.

Having now the relation between ingoing and outgoing calories, and ingoing and outgoing water, one is able to determine how much body tissue is lost or gained separately from the amounts of edema lost or gained. The resultant change in body weight can be interpreted and even predicted.

Figure II shows the complete data on a patient with chronic nephritis and edema, and illustrates the practical importance of this method. This patient was a boy of 15 years, who had previously been in the hospital with general anasarca, coma, and convulsions. He responded to treatment and was discharged. He returned for check-up and had been gaining weight. The question arose whether the gain in weight was body tissue or reaccumulation of edema. If edema, it would be imperative to begin treatment immediately in order to avoid

another general anasarca. A complete study revealed that the boy was gaining 30 grams daily, which was the resultant of having burned 73 grams of fat, storing 21 grams

that the patient should have 500 calories added to the diet, that the protein was sufficient for nitrogen balance and that treatment for the edema should be started immediately.

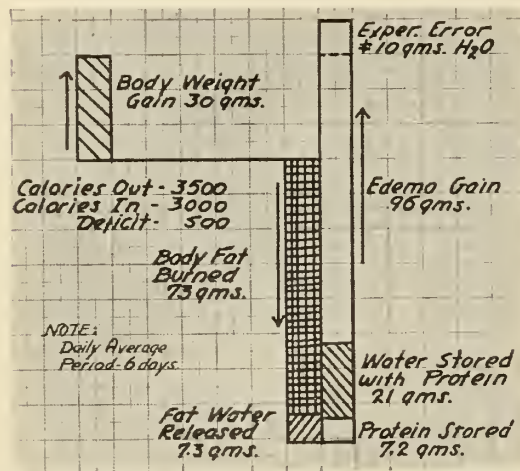


Fig. 2.

of protein and accumulating 96 grams of edema daily. From these data it is obvious

CONCLUSION

This method has not been presented with the illusion that it is practical from the general practitioner's standpoint. It is presented, in the first place, to point out the futility of attempting any conclusions regarding the progress of edema by changes in body weight correlated with fluid intake and urine output. This is especially true in the "latent" type of case, for which treatment holds its greatest benefit.

Secondly, we are studying the effectiveness of various types of treatment for edema in this manner. Some knowledge of the method used will help the physician to better evaluate the results obtained and have a clearer conception of the treatments to be advocated.

ALLERGIC DISEASES IN CHILDREN

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During the past few years a decided increase in interest has been manifested in a group of symptom-complexes referred to as "Allergic Diseases." Pirquet defined allergy as a changed capacity to react to foreign substances. About 1 per cent of the population develop symptoms due to this abnormal reaction. We recognize today that certain individuals are born with a constitution enabling them to develop various phenomena such as asthma, hay fever, eczema, migraine, urticaria, angioneurotic edema, neurological and gastro-intestinal complexes, and various other manifestations presenting more obscure symptoms. In no field of medicine can the possibility of allergy as an etiological factor be ignored. In the practice of pediatrics, in particular, is a knowledge essential of the allergic nature of many of the symptom-complexes frequently met with. These diseases are due to a fundamental basic pathology. This constitutional make-up is definitely inherited. A positive family history is obtained in from 50 per cent to 80 per cent of allergic conditions. There is no inheritance of the symptom-complex or the specific sensitizing agent. A father may have hay fever due to pollen, yet his infant has eczema due to wheat. In other words, it is a constitutional inheritance, not a specific disease or specific sensitivity which is inherited. When there is a positive allergic history in both parents, the possibility of the offspring escaping is very much reduced.

These individuals may become sensitized to foods in utero as has been shown by Ratner, or develop sensitizations later on in life. An individual may become sensitive to a great variety of alien agents, including foods, pollens, drugs, feathers, furs, smoke, dust, vapors, oils, animal sera, bacteria, insect toxins, and specific physical agents such

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as cold, heat, light and mechanical irritation. It must be remembered that an individual once sensitive is always a possible sufferer, although the sensitizing agent and nature of the allergic response may vary from time to time, or entirely disappear.

In infancy, foods are the chief sensitizing agents and eczema the most frequent allergic phenomenon. With increasing age, new sensitizations, including inhalants and epidermals, are acquired and others lost; asthma or hay fever may now manifest themselves. Multiple sensitization is frequently found. At any age, however, any type of sensitization and allergic phenomenon can and does occur.

The allergic nature of a symptom-complex can often be diagnosed because of these characteristic findings:

1. The symptom-complex is often typical, such as asthma, hay fever, urticaria, and eczema.

2. There is usually a positive family history of allergy.

3. Other allergic symptoms may have been or may be still present.

4. The symptoms may be caused by a definite association with a foreign substance, removal of which causes a disappearance of the symptoms.

5. The allergic individual frequently responds to skin tests which may demonstrate the cause of his symptoms.

6. Eosinophilia—from 3 to 20 per cent—especially during the active phase of the condition.

In carrying out the skin tests, I have found the cutaneous test more practical for children. Small abrasions are made with a needle or Pirquet borer, on the flexor surfaces of the forearms, front or the thighs or on the back. A small amount of tenth normal sodium hydroxide is applied to each abrasion. A small amount of dry protein extract is then rubbed into each scratch. Reactions usually appear in fifteen minutes. Delayed reactions are not uncommon, and for this reason readings should again be made in twenty-four hours. Reactions in children are frequently faint and difficult of interpretation. A slight erythema may indicate an extremely significant etiological agent.

Intradermal tests are valuable where negative results are obtained with the scratch method. They are, however, much more

difficult to perform in young children and infants, and are not entirely devoid of danger. Severe reactions resembling anaphylactic shock have occurred following an intradermal injection in very sensitive patients. In some cases, due to its greater sensitivity, too many positive skin tests are obtained with the intradermal test. Delayed reactions occur also with the intradermal tests.

Peshkin has pointed out that the scratch test is superior for detecting sensitization due to rabbit hair, horse dander, rag-weed, cotton-seed, duck and goose feathers, cat and dog hair, mustard and egg-white. He has shown that the intradermal test is more efficient for house dust, chicken and chicken feathers, wheat and corn.

It is felt that group tests are very unreliable. In a group of proteins as small as whole-wheat or whole milk, one frequently finds negative results for the whole substance, but a positive result for one of its constituents. For example, lact-albumin may be positive and whole milk negative. Frequently one elicits a positive test for wheat-proteose and a negative test for whole-wheat. In general the larger the group used, the greater the possibility of negative results.

In attempting to discover the role played by a specific food in any allergic disease, a careful history of food dislikes is especially important in children. In the absence of positive skin tests, elimination of suspected foods and other factors is a practical and valuable procedure. The diagnosis and treatment of the allergic diseases is not a laboratory procedure but demands a most careful history in all cases, careful supervision of the diet and environment, as well as accurately performed skin tests and thorough X-ray and other laboratory studies.

SKIN MANIFESTATIONS

Eczema is the most frequent manifestation of allergy in children, and is the earliest manifestation met with. As in all allergic diseases, a carefully taken history is of the greatest importance. The onset of the eczema may be in relation to a definite food or a change in environment. In 30 per cent of cases of infantile eczema, wheat, milk or egg can be shown to be the exciting cause. Skin tests should be performed for these and other foods taken by the child. The origin of the many carbohydrates used in

modifying formulas must be considered. Some are made from corn (Karo syrup), wheat and barley (various dextrin-maltose preparations), and cane and beet sugar. One must also consider external causes, such as orris- and rice-containing face powders, wool, cotton and silk fabrics, soaps, animal hair, feathers and house dust. The offending agent can often be determined by means of skin tests. Substitutions can then be easily made for all items in the child's diet and environment, except milk. In milk-sensitive cases, heated milk (milk boiled one hour and evaporated milk) or dried milks, are often tolerated. In some milk-sensitive cases, a soy-bean flour substitute (Sobee) can be used instead of milk. This preparation, which theoretically should be of great value, is frequently poorly tolerated by the infant, and in some cases refused. In many milk-sensitive cases, very favorable results can be obtained by desensitizing with injections of milk.

The breast-fed infant, in whom any item in the maternal diet may be the offending agent, presents a more difficult problem. Preliminary skin tests should be done for the more common foods. If the cause is discovered in this group, these foods are omitted from the mother's diet. If the tests are negative, the mother is placed on a diet from which is eliminated all foods except those for which the skin tests are negative. Sensitivity to the breast milk per se is rare. Sensitivity to one of the foods coming through the mother's milk is common. Weaning the infant because of eczema should not be advised until all other possibilities have been carefully investigated. If necessary, a nursing mother can be put on a milk-free diet (if the infant is sensitive to cow's milk) without impairing the milk supply.

In all cases of eczema, local treatment must be judicious and prolonged. Especial reference should be made to the relationship of seborrhea ("cradle cap," "milk crust") of the scalp to infantile eczema. In the presence of this condition, the eczema tends to persist despite the removal of an apparently offending food protein. One frequently obtains a history of seborrhea of the scalp preceding the eczema. Many cases must be considered as due to the irritating effect of scaly particles dropping onto the face from the scalp. The use of a weak

modified Whitfield's ointment on the scalp frequently clears up the adjacent facial eczema.

Local treatment of the eczema itself is chiefly concerned with allaying the itching by means of soothing antipruritic ointments, the application of crude coal tar and coal tar distillate ointments, X-ray and alpine light therapy. In all cases of eczema a secondary fungus infection is usually present. This is especially true of the chronic type in older children involving the flexor surfaces of the knees and elbow-joints. Treatment must therefore be directed not only toward removal of the sensitizing agents, but also to clearing up this secondary infection.

Urticaria and angioneurotic edema are extremely difficult problems. In many of these cases the allergic factor can be ascertained from a careful history of new foods. Skin tests in these conditions are very unreliable and frequently impossible to elicit. One must rely chiefly on a careful history and a series of elimination diets to determine the causative factors. General treatment consists in measures to elevate the patient's nutritional condition, and treatment or removal of foci of infection such as infected teeth, tonsils, adenoids and sinuses. Chronic constipation if present must be overcome. In a few cases, removal of a chronic appendix has cleared up the urticaria. Local anti-pruritic measures are valuable for temporary relief. Adrenalin injections give rapid but transient relief. Recently I have found subcutaneous injections of calcium gluconate of value in decreasing the frequency of the attacks.

ASTHMA AND ALLERGIC BRONCHITIS

The diagnosis of the etiological factors in asthma requires a very careful history and physical examination, carefully performed and complete skin tests, and complete laboratory study. Frequently a careful study of the patient's home and other environmental factors are necessary. Other causes of wheezing in children, such as foreign body in the air passages, enlarged hilus glands, cardiac disease and enlarged thymus gland, should be ruled out.

In many cases a definite sensitizing agent can be found. In others the asthma seems to be related to recurring upper respiratory infections. In these cases the infection apparently acts as the precipitating cause. The

asthmatic child is comparable to a "loaded gun," the "trigger" being pulled by a number of exciting causes, such as infection, contact with a sensitizing agent, exposure, changes in temperature, emotional upsets, and other non-specific disturbances. The treatment consists in removing any specific sensitizing agent, the use of elimination diets to determine specific factors, and changes in environmental factors, such as bedding and pillows. The use of vaccines to prevent the onset of frequent colds has given excellent results. The child's resistance should be built up as much as possible. Enlarged hilus glands should be treated with X-ray therapy and alpine light. Infected sinuses should be treated as much as possible medically. The removal of tonsils and adenoids should be done only after prolonged study and in cases showing marked pathological changes. Many cases are made worse by operations in the nose and throat and such measures should be advised only after careful selection of cases.

In some cases excellent results have been obtained by means of nonspecific protein therapy. The method of choice is either milk injections or the use of catarrhal vaccine, which latter may also decrease the upper respiratory infections.

Allergic bronchitis should be viewed as the precursor of asthma. It is characterized by a chronic dry cough frequently spasmodic in nature resembling whooping cough. There is no evident wheezing, but examination of the chest usually reveals numerous coarse sibilant and wheezing dry râles. It is important to recognize that many cases of chronic bronchitis are allergic in nature. Eosinophilia is frequently present. Even its absence should not deter one from a careful allergic investigation of any case of chronic cough of unknown etiology. Tuberculosis, bronchiectasis, sinusitis and septic adenoids and tonsils must be ruled out as the cause in these cases. The diagnosis and treatment of allergic bronchitis follow the same general plan as outlined for asthma.

The question of removal of adenoids and tonsils in cases of chronic bronchitis, which may be allergic in nature, should be cautiously approached. Many cases of allergic bronchitis develop typical asthma following removal of adenoids and tonsils. I have advised removal of these tissues in some

cases that were definitely allergic in nature only after a long period (one to two years) of freedom from symptoms, and never under four years of age in this type of case.

HAY FEVER AND ALLERGIC RHINITIS

Seasonal hay fever is not uncommon in children. The early spring type, due to the pollination of trees, is of short duration and usually desensitization is unnecessary. The summer type (commonly referred to as rose-fever) is due chiefly to the pollination of June grass, timothy, orchard grass and red-top. The fall type is chiefly due to the ragweeds, sage and cocklebur. Many other plants pollinate during these periods but in the diagnosis and treatment of hay fever only the wind-pollinated plants need be considered. Patients should however be advised to avoid close contact with all plants during the hay fever season. Treatment consists in determining the specific pollens involved and desensitizing with correct mixtures. The dosage and rate of increase varies with each patient. The treatment must be individualized. The number of injections varies from fifteen to thirty and the final dose from five thousand units (.5 c.c. 1 per cent solution) to 60,000 units (2 c.c. 3 per cent solution), or more. Because of the great individual variation in tolerance, successful treatment cannot follow a routine, but depends upon a careful study of each patient. The injections should be continued at weekly intervals throughout the entire season to insure against loss of tolerance.

Recently the continuous treatment of hay fever cases at three to four weeks interval, all year round, has been advocated. This method seems to offer greater hope of permanent cure and is well worth trying.

One sees frequently children who have apparently "colds" all year round. These cases are variously diagnosed, sinusitis, septic adenoids and tonsils and upper respiratory infection. Many of these cases are perennial hay fever or allergic rhinitis. Smears of the nasal secretion usually show eosinophilia in the allergic type. The nasal mucous membranes present a typical bluish turgid appearance with a thin sero-mucoid exudate on the surface.

The etiological factors determined by skin tests may be foods, epidermals, house-dust, tobacco, etc. Desensitization with specific

extracts has been highly successful in this type of case.

VERNAL CONJUNCTIVITIS

Conjunctivitis is one of the prominent symptoms of hay fever. It can occur, however, alone, not only during the hay fever season but at any time of the year, due to various sensitizing agents. These must be carefully distinguished from conjunctivitis due to non-allergic causes. The allergic cases are characterized by itching and redness of the eyes and moderate lacrimation. Eosinophils are frequently found in smears from the conjunctival sac. Positive skin tests are difficult to elicit in vernal conjunctivitis. When it occurs during the pollination season, desensitization with pollen mixtures is

effective. In the absence of positive skin tests very excellent results have been obtained in both children and adults with non-specific protein therapy. I have found injections of autoclaved skimmed milk most effective. The majority of cases clear up in from five to ten injections. The initial dose is .2 c.c. increasing .1 c.c. each dose, every other day until 1 c.c. is reached.

The field of allergy broadens rapidly as many other manifestations are discovered. Some cases of epilepsy, most cases of migraine, cases of obscure abdominal pain, and some cases of chronic sinusitis have been solved on this basis. The principles of diagnosis and treatment as outlined above can be applied to the manifestations of allergy as they appear in various other organ-systems. 914 MACCABEES BLDG.

ACTINOMYCOSIS OF THE LIVER

A CASE REPORT

GEORGE G. RIECKHOFF, M.D.†

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Mr. C. C. was admitted to the hospital on December 23, 1930. He complained of pain in the abdomen of eighteen hours duration. It had localized over McBurney's point, with fever, nausea and vomiting. The family history was negative and he had never had any serious illness or operation. Examination disclosed a well developed man about 25 years of age. There was marked tenderness and rigidity over the lower right quadrant of the abdomen. No other abnormality was noted. His teeth and gums were in good condition and his throat was negative. White blood cells 11,000. Polymorphonuclears 87 per cent. Small lymphocytes 10 per cent. Urine analysis was negative.

An appendectomy was performed. A sero-purulent discharge appeared on opening the peritoneum. The ileum and cecum were slightly distended and congested.

The pathological report by Dr. James E. Davis was as follows: "Gross—An appendix acutely inflamed and hemorrhagic with an area of perforation in the proximal third. Microscopic diagnosis—Acute, suppurative, hemorrhagic, gangrenous appendicitis, peritonitis, and omentitis."

The convalescence was stormy and characterized by extreme distension which gradually subsided. The wound healed well and he was discharged from the hospital on January 16, 1931.

One month later he had regained his preoperative weight and felt perfectly well. He spent the next two months on a farm doing light work.

On April 3, 1931, he was readmitted to the hospital. He now complained of severe pain in the back and upper right quadrant of the abdomen. Temperature 101° F. Pulse 100. White blood count 15,000. Examination of the chest negative. Urine analysis normal.

During the following week the pain localized in the region of the right kidney. A distinct swelling could now be observed just below the ribs in the right vertebro-costal angle.

An incision was made in the right flank and a large abscess found between the right lobe of the liver and the diaphragm. The pus was light yellow in color and had a very bad odor. A smear was

taken and showed a few white blood cells, but no tubercle bacilli. Drainage tubes were inserted.

No improvement was shown. His temperature would go to 102° F. or 103° F. each afternoon. The wound continued to drain and he gradually lost weight and strength. A number of X-rays were taken which now showed a distinct enlargement of the liver with restriction of movement on the right side of the diaphragm.

On August 4, 1931, the incision in the flank was enlarged, the liver examined and found to contain multiple abscesses. A sinus was found extending retroperitoneally from the liver to the crest of the ilium. The crest was roughened, showing an early osteomyelitis. The abscess cavities were curetted. There was marked bleeding from the cavity walls. The pus and debris were examined by Dr. A. O. Brines who found the typical ray fungus or bacillus of actinomycosis.

The pus had now assumed a bright yellow color. No sulphur granules were seen. His condition gradually became worse, dying on September 11, 1931. No autopsy was obtained.

This case seems to corroborate the theory of J. H. Wright: the bacillus a normal habitat of the intestinal canal; the port of entry a perforated appendix; the contributing cause a lowered resistance, and the lodgment of the organism at or near the dome of the liver, away from some inhibitive factor in the bowel or peritoneum.

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Actinomycosis was first recognized by Langenbeck, in 1845. The first case in this country was reported in 1885 by J. B. Murphy of Chicago. Actinomycosis of the liver is quite rare.

F. A. Collier and G. G. Adie in 1924 reported fifty cases of actinomycosis taken from the records of the Department of Surgery of the University of Michigan. One case was listed as primarily of the liver.

Louis P. Good in 1931 reported sixty-two cases of abdominal actinomycosis taken from the records of the Mayo Clinic. Of this number, two were listed as primary in the gall bladder and appendix.

An infection of this type usually runs a chronic course. It is characterized by the formation of deep seated abscesses and sinus tracts. The surrounding tissue becomes leathery and brawny. The pus is of a light lemon color and contains the characteristic sulphur granules. All tissues are attacked, but the intestinal canal and peritoneum seem

to be especially resistant to invasion. The mortality is between 60 and 70 per cent.

That the incidence is less today than in former years is probably due to the work of the Public Health Service in eliminating or limiting the infection of lumpy jaw in cattle. Some authorities believe it is transmitted in straw, weeds, or hay.

The treatment consists in the incision and drainage of abscesses. The use of potassium or sodium iodide in large and long continued doses. The use of the X-ray is sometimes advised.

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HYPERPARATHYROIDISM*

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DETROIT, MICHIGAN

Hyperparathyroidism is a definite clinical entity, which was finally established in 1925, when Mandl, of Vienna, deliberately operated for a parathyroid tumor as the primary cause of the syndrome which existed in his patient.

The outstanding features of his case were radiologic evidence of osteitis fibrosa of numerous skeletal structures, complicated by spontaneous fracture of the femur. He explored and found a parathyroid tumor. The removal of the growth was followed by prompt and definite improvement in the clinical picture, and a decrease in the serum calcium present in the blood.

HISTORICAL

MacCallum and Voegtlin, in 1909, clearly demonstrated that postoperative tetany was the result of injury, or removal of the parathyroid glandules in thyroid operations. They believed the lowered calcium content of the tissues and body fluids, especially in the blood, was the cause of the symptoms present. They established their claim to this opinion, by causing the convulsions of tetany to cease by the intravenous injection of calcium salts. Oral and subcutaneous administration of calcium salts had the same effect, although the beneficial action developed much more slowly. They concluded that the function of the parathyroid glands is to regulate the calcium exchange in the body, and considered that all the symptoms following parathyroidectomy are due to calcium deficiency. MacCallum, in 1912, stated that

the galvanic hyperexcitability of the nerves, which is a characteristic feature of tetany, is due to some change induced in the blood by parathyroidectomy.

A number of other investigators continued to inquire into the function of the parathyroid glandules, and finally Salveson, in 1923, stated that the whole symptomatology of parathyroid deficiency is related to a lowered calcium content of the blood. He held that the calcium content of the blood is normally controlled by the parathyroid glands.

J. B. Collip, in 1925, recounted, in the Harvey Lectures, the physiology of the parathyroid glandules, as the result of his experimental investigations, and final isolation of the active hormone which these structures elaborate. He termed the substance para-thormone, and experimentally produced hyper- and hypo-calcemic states in laboratory animals, which he in turn treated by adding or withdrawing calcium as indicated. He carried, to a definite conclusion, the investigation of the function of the para-

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thyroid bodies, and the clinical features present when disturbance in secretion is present.

Van Recklinghausen, in 1904, first described osteitis fibrosa cystica. Askanazy, in

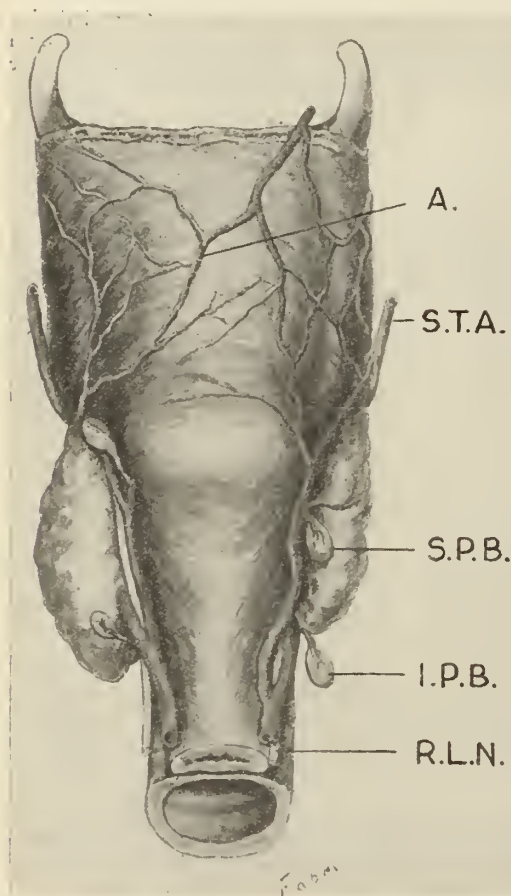


Fig. 1. Posterior view of thyroid gland. Anastomosis between parathyroid bodies on both sides. A., anastomosis in posterior surface of pharynx; S.T.A., superior thyroid artery; S.P.B., superior parathyroid body; I.P.B., inferior parathyroid body; R.L.N., recurrent laryngeal nerve. Reduced one-sixth natural size.

1904, published the first case of parathyroid tumor, found post mortem, in a case of osteitis fibrosa cystica. Erdheim, in 1907, noted the relationship of parathyroid hyperplasia to osteitis fibrosa cystica, and believed it was due to a compensatory effort on the part of the glands to increase calcemia. (Three cases—Erdheim Theory.) DaCosta, in 1909, collected eight cases of parathyroid tumor from the literature, one of them his own. He did not draw attention to any remote relationship of the body to this pathological state. Lloyd, in a review of ten thousand consecutive necropsies, found five parathyroid tumors. Hoffheinz, in 1925, reported forty-five cases of parathyroid tumors, twenty-seven of them related to

disease of the skeleton. Mandl, in 1925, transplanted healthy parathyroid glands into a patient with generalized osteitis fibrosa, but it had no effect on the progressive course of the disease. He then explored the region of the parathyroid glands, and removed a parathyroid adenoma. Following this, the patient spectacularly improved. This led Mandl to believe that in some cases, at least, the parathyroid tumor is primary and the bony changes are secondary. Oppel of Leningrad, up to 1928, had done seventy parathyroidectomies for ankylosing arthritis, and hypertrophic metastatic calcium deposits in and about the spinal and other large joints in the body. Up to August, 1930, nine cases have been reported which correspond to a syndrome described as hyperparathyroidism. (Barr, Bulger and Dixon.) In five of the nine cases, operations were performed and tumors were removed. In one of the nine cases, two apparently normal, but undoubtedly hyperfunctioning parathyroid glands were removed. Three patients were not operated on, and there is no proof of the presence of a tumor, but many of the clinical features were present. Ballin and Morse report their observations upon fifteen parathyroidectomies. Six patients had general demineralization of the skeleton with demineralized foci in the vertebræ and other bones. Seven had a combination of demineralization of the spine, leading to a kyphosis, with stiffening or ankylosing arthritic joints.

One of the most remarkable cases is that reported by Pemberton and Geddie in 1930. A girl, fourteen years of age, complained of spells of vomiting, pallor and loss of weight. The history was sixteen months duration, with the loss of twenty-nine pounds. She had polydipsia and polyuria, with nocturia three to five times each night for the preceding year. She drank about two quarts of water each night. On examination the patient was pale, emaciated and appeared to be chronically ill. The electrical irritability was decreased. Her vomiting was not related to food, recurring about every two weeks and lasting from one to five days. Roentgenograms of all the bones gave evidence of diffuse decalcification. A study of three days of calcium and phosphorus in the urine and stool revealed a slightly positive phosphorus balance and a slightly negative calcium balance.

VARIATIONS IN BLOOD SERUM CALCIUM AND PHOSPHORUS

(Case of Pemberton and Geddie)

	Calcium mg. in each 100 c.c.	Phosphorus mg. in each 100 c.c.
Before operation	16.32	2.46
	17.67	2.80
After operation.....	7.89	2.2
	7.74	3.41

Operation: Diagnosis of parathyroid tumor was made, although no tumor could be felt in the neck. At operation, November 16, 1929, a parathyroid tumor was found behind the left lobe of the thyroid gland, at the inferior pole, and outside of the capsule.

The effect of the operation was remarkable. Moderate tetany developed, for which calcium chloride, cod liver oil and viosterol were administered daily. This is the youngest patient reported to prove the clinical syndrome known as hyperparathyroidism. The symptoms in this case were related to the intestinal and genito-urinary systems, although X-ray evidence of diffuse decalcification of all the bones was revealed. It is interesting to speculate in this case, if an early diagnosis had not been made, whether osteitis fibrosa would have developed.

CALCIUM AND PHOSPHORUS CONTENT OF BLOOD

The normal blood-serum calcium varies between 9.0 and 11.0 mg. per 100 c.c. The most obvious function of calcium in the body is the formation of bone. Donald Hunter has well stated it when he said, "The skeleton of the mammal is not only a supporting structure, but it is also a reservoir of calcium and phosphorus. Bone salts are continuously removed and renewed, and the skeleton is often drawn upon when there is a deficiency of calcium, either as the result of a dietetic error or organic disease."

Calcium is extremely important in the blood and tissues, because it establishes a balance which determines the degree of irritability of muscle and nerve. However, wide variations from the normal can temporarily exist without apparent interference with vital function. Symptomless hypercalcemia can temporarily exist in cases of parathyroid over-dosage, and in spontaneous hyperparathyroidism, where the serum calcium may reach from 16 to 19 mg. per 100 c.c. Inorganic phosphorus in the blood varies between 2.5 and 3.5 mg. per 100 c.c. In children, where bone growth is more active, it may reach as high as 5 mg. per 100 c.c. The function of phosphorus is essential to the deposition of bone. It is closely related to calcium function in laying down the bone salts or growth.

It is very important to bear in mind the function of the calcium and phosphorus, and their normal occurrence in blood-serum, and excretion in the urine. It is in the con-

dition under consideration (hyperparathyroidism) that a very remarkable clinical picture exists, the result of an increase in the calcium content in the blood, with concomitant reduction in the inorganic phosphorus content.

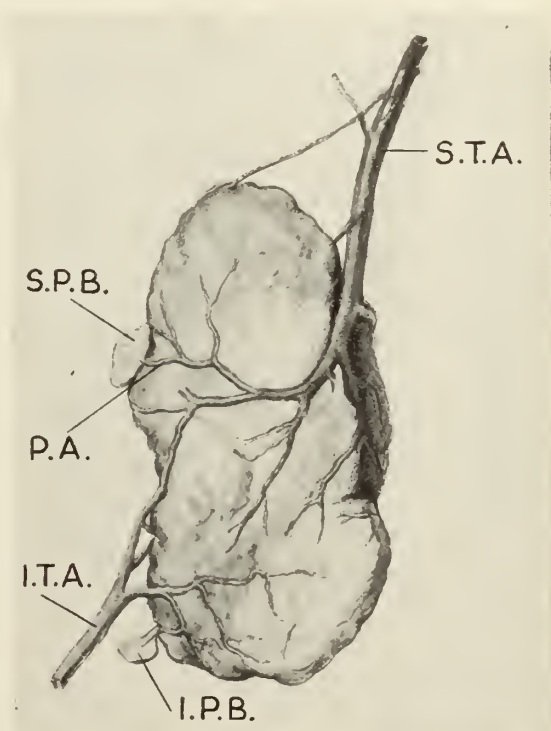


Fig. 2. Left thyroid lobe viewed from behind. Shows unusual position and blood supply of superior parathyroid body, rendering body likely of removal in lobectomy. S.T.A., superior thyroid artery; S.P.B., superior parathyroid body; P.A., parathyroid artery; I.T.A., inferior thyroid artery; I.P.B., inferior parathyroid body. Reduced one-sixth natural size.

SYMPTOMS

The definite train of symptoms of hyperparathyroidism, which suggests hyperfunctioning of the parathyroid glands, is expressed by the following: (1) High concentration of serum calcium (from 10 to 14 mg. per 100 c.c.); (2) low concentration of serum phosphorus (from 1 to 3 mg. per 100 c.c.); (3) abnormal excretion of calcium in the urine; (4) rarefaction of bones (mild and marked demineralization), occurrence of multiple cysts and tumors of bones; (5) hypotonia and muscular weakness (Pemberton and Geddie); (6) polyuria and polydipsia; (7) severe abdominal pain; (8) moderate or marked deformity, including forward curvature of the spine, bowing of the thighs, and deformities due to localized cyst formation in the bones.

In hypoparathyroidism, a condition termed

tetany, the clinical features are quite unmistakable to the examiner. There is hyper-irritability of the nervous system with convulsive seizures, and carpopedal spasm; Trousseau and Chvostek signs are present. The blood calcium and blood phosphorus are

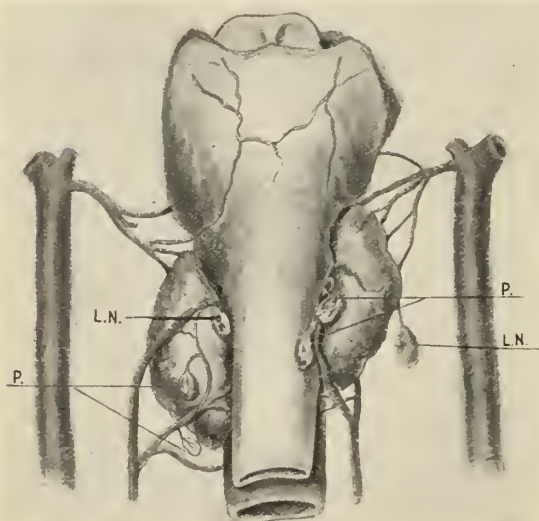


Fig. 3. Posterior view. P., parathyroid glandules; L.N., lymph nodes. Note particularly the close anatomical relationship of the lymph nodes to the thyroid gland and vessels from which the parathyroids spring.

each respectively reduced and increased, in conformity with the findings in this condition.

The brevity of this paper does not permit an extended discussion of the biochemical features, which relate to the functioning of the parathyroid glandules in health and disease. Reference to the Goulstonian Lectures, by Donald Hunter, before the Royal College of Physicians of London, and The Harvey Lectures, by J. B. Collip, before The Harvey Society in New York, will familiarize the reader with the data relating to this subject.

I desire, at this point, to draw your attention to the clinical features of a case of hyperparathyroidism which came under my observation during the past year.

A woman, fifty-nine years of age, born in Hungary, has lived in United States for thirty years. Has five adult children. One child died in infancy of pneumonia. Medical history of her ancestors is negative, with relation to her present condition. In July, 1930, she complained of "rheumatism" which had been present for three years. There was an eruption on both sides of the face, in front and back of the ears, which was characteristic of lupus, and which was being treated by radiation. She complained of pain in her knees, ankle-joints, hands and

fingers, for which she has occasionally spent a day or two in bed. There is some forward curvature of the spine. She complained of no other difficulty, and had been fairly active up to this time. The important features of her examination, with direct relation to the discussion of hyperparathyroidism, were generalized arthritis involving all the joints of the upper and lower extremities with osteoarthritic changes of the wrists and fingers, causing slight flexion of the interphalangeal joints of the hands, with characteristic lateral deviation. The knee joints were freely movable, with some crepitus. The movements of the spine were very limited, the patient assuming almost a fixed posture when sitting upright. Vaginal-abdominal examination was negative. In the upright position, she exhibited a swelling of the feet and legs, with varicosities in the left leg. The arches were very low.

At this time the patient was placed upon dietetic treatment, as indicated by Pemberton, Osgood and others for arthritis. Thyroid extract, one-grain tablet twice daily, warm bath, body massage and rest, with careful attention to the intestinal tract, constituted a part of the regimen of treatment. The lupus was improved by therapeutic X-ray treatment; but otherwise the patient showed no improvement in her skeletal disease.

On April 1, 1931, she was admitted into the Woman's Hospital, where she remained for seventeen days. At this time, there was a distinct bilateral facial lesion (lupus), accompanied with considerable edema of both ear lobes. There was paroxysmal vomiting, unrelated to food, associated with severe, persistent, burning abdominal pain, which had existed for the past three weeks. For several weeks, the patient noted marked increased frequency of urination, day and night, passing large quantities of urine. This latter symptom was accompanied by extreme thirst, and shortness of breath upon exertion, severe paroxysmal pain in both legs, more marked in the left leg, with swelling of the ankles and feet.

The urine examination disclosed a faint trace of albumin; otherwise it was negative.

The blood examination disclosed a moderate anemia; otherwise, negative.

The blood chemistry examination indicates calcium 10.4 mg. per 100 c.c. serum. Phosphorus 6.25 mg. per 100 c.c. plasma. This phosphorus is a little high, but the calcium is definitely within the range of normal. The physical weakness was more pronounced, and the patient was apathetic to a marked degree. Physical examination was negative with reference to the eyes, thyroid gland, oral cavity, thorax and abdomen. No intra-abdominal lesion could be found to account for the severe pain of which she complained. Blood pressure 120/80. X-ray examination, made by Dr. Shore, disclosed definite demineralization of the vertebral bodies, the 11th thoracic being reduced to about one-half of the normal thickness, giving the appearance of a compression fracture of this spinal unit. This finding is quite common in the radiologic study of subjects of this disease. A vertebral body is often so demineralized as to show partial collapse of its thickness. There is coincident thinning out of the cortical structure of many or all of the spinal units. The absorption of calcium in this case was also present in the carpal and phalangeal bones of both hands, with associated arthritic changes in the interphalangeal joints.

The patient remained in the hospital for seventeen days, and received an intravenous injection of five per cent calcium lactate solution (Lilly & Co.), which did not affect the course of the disease, and in view of the hypercalcemia, which clinically was undoubtedly present, was not indicated. She succumbed to

her disease six weeks after being discharged from the hospital, the terminal state being one of physical weakness, profound mental apathy, and cardio-vascular breakdown. The abdominal pain was persistent, and remained unrelieved throughout her illness. Unfortunately no autopsy was done.

The evidence in this case pointed to hyperparathyroidism, and surgical exploration of the parathyroid region was justifiable. It was not done, because the writer was misled by the studies in the blood serum calcium and phosphorus.

SURGICAL TREATMENT

Since Sandstrom, in 1880, and, at a later date, Gley, Walsh and Kohn, determined the existence of the parathyroid bodies, their location and blood supply have been definitely established. The writer, in 1908, carefully investigated the number, position and circulation of the parathyroid bodies, and proved that four invariably exist, in an almost constant relationship to the dorsal-lateral surfaces of the thyroid lobes. The upper invariably hangs from an anastomotic channel, between a large branch of the inferior thyroid artery, which passes up the dorsal-lateral surface of the lobe, to anastomose with a main superior thyroid branch. The lower glandule is in closer relationship to the inferior pole of the thyroid gland, and always hangs from a branch of the inferior thyroid trunk. The glandule, as a rule, lies within a thin capsule, and may be so closely related to the thyroid capsule as to appear to be intra-glandular in its location. Their identification in the anatomical laboratory is not always an easy matter, and in the living subject there will be some difficulty in definitely isolating and recognizing a normal parathyroid gland. When an adenoma or a neoplastic growth is present, the site of the tumor (parathyroid glandule) is usually indicated by a nodule, often the size of a hazelnut, sometimes larger, which directs the operator to the site of the parathyroid tumor. This has been the case in a number of operative instances. Therefore, careful attention must be given, in searching for the parathyroid glandules, to injury of the recurrent laryngeal nerve, since prolonged traction upon the thyroid lobe, with manipulation at the inferior pole, may subject the motor laryngeal nerves to traumatic

injury, which may prove of serious consequence. Following the operation, severe pressure from a hematoma, causing impairment of breathing, from involvement of the motor nerves, has been reported, due to inadequate control of the blood supply of the gland.

When parathyroid operations are conducted, as they should always be, under local anesthesia, supplemented with nitrous oxide, the patient can be quickly brought from the twilight zone of sleep to sufficient wakefulness, to exercise his voice and indicate injury to the recurrent laryngeal nerves.

Following an operation to remove a parathyroid tumor, because of hypercalcemic symptoms, it is not to be expected that all bone changes will quickly or permanently disappear. Prolonged hyperparathyroidism may produce organic damage, analogous to that which results from hyperthyroidism of long duration (exophthalmic goiter).

Removal of the offending cause will definitely retard the progress of the disease, and cause almost an immediate disappearance of the abdominal pain and vomiting, and may be followed by a startling recovery in the clinical picture, such as is reported by Pemberton and Geddie in their case.

Marked postural deformity can hardly be improved by removing a parathyroid tumor, especially after metastatic calcium deposits of the spine and other large joints has taken place.

It is the belief of the writer that the clear-cut picture of this interesting syndrome will attract attention to many obscure bone and joint conditions, which have been overlooked, and about which more medical clarity can be determined.

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FAMOUS MEN IN MEDICAL HISTORY

AUSTIN FLINT*

FRANCIS J. HERINGHAUS

In tracing the history of physical diagnosis there stand out pre-eminently in the 18th century the names of Auenbrugger in Vienna, the first to recognize the value of percussion, and Laennec in Paris, inventor of the stethoscope; in the 19th century on the continent there appear the names of Louis in Paris, a disciple of Laennec; Skoda and Rokitansky in Bohemia; and Stokes in England. Foremost among the names of Americans in this category stands that of Austin Flint, Sr., teacher, writer, clinician and father; undoubtedly the most outstanding figure in the field of clinical medicine in America previous to Sir William Osler.

At the time of his birth in 1812 physical diagnosis was in its infancy. The art of percussion had but recently been introduced. When he was seven years old Laennec invented the stethoscope, that omnipresent instrument in the pocket of every would-be clinician and the inspiration for a poem by Oliver Wendell Holmes entitled "The Stethoscope Song," a professional ballad. But before his death in 1886 and due in no small measure to his own contributions and energies he was to see the art and science of percussion and auscultation elevated to the high rank they now enjoy among the practitioners of medicine in every land.

Austin Flint, according to the statement of Jacobi, one of his distinguished successors, was singularly fortunate both in regard to his birth, his life and his sudden and painless death. He came of a long line of New England Puritans; the first Flint, one Thomas, having emigrated from Derbyshire, England and settled in Concord, Mass., in 1638. His great grandfather, grandfather and father were all physicians in Massachusetts. Thus, he was a descendant of one of the oldest families in America and one which by their culture and labors can rightfully lay claim as belonging to genuine American Aristocracy.

Of his early life little has been recorded from his birth at Petersham, Mass., in 1812,

until the time of his entrance to Amherst College, where he received a liberal education. Later he entered Harvard University and Harvard Medical School, from which he was graduated in 1833, having had for his teachers such men as James Jackson, Sr., John C. Warren, and Jacob Bigelow. For the first three years following his graduation he practiced medicine in Boston and Northampton.

In 1836 he moved to Buffalo, New York, and made this place his residence for the next sixteen years with a few exceptions. His zeal and thorough methods won for him immediately something of reputation, with the result that eight years later he was called to Chicago to become Professor of Clinical Medicine in Rush Medical College, a position which he held for only a year, returning in 1845 to Buffalo. From the very first years of his residence in Buffalo, he became interested not only in practicing medicine but in researches along numerous lines, the first of which was in the subject of marsh miasms. In 1841 he published in the *American Journal of the Medical Sciences* an article concerning the treatment of intermittent fever with quinine alone and not with mercurials as had previously been done. He was young and not well known but he published with this article a list of statistics which substantiated his contentions and this caused his article to attract wide attention. The thoroughness and careful observations which he employed in these early investigations became a characteristic of all his subsequent endeavors and herein lies the secret of much of his later success. From this time throughout all his life he was a contributor to the current medical periodicals.

In 1846 he established the *Buffalo Medical Journal* and remained as its editor for the next ten years, a periodical which gained a wide reputation in its time and which has at the present time been absorbed by the *Medical Review of Reviews*.

Dr. Flint by this time had become a prominent figure among the medical pro-

*Read before the Victor Vaughan Society of the University of Michigan Medical School on April 22, 1931.

fession in Buffalo and throughout New England and Canada, where his Buffalo Medical Journal enjoyed a wide circulation. In the following year, 1847, in association with Frank H. Hamilton and James P. White, he organized the Buffalo Medical College and became its first Professor of the Theory and Practice of Medicine, a position which he held until his departure from the city in 1852. The task of organizing a new medical school is obviously not an easy one and this was no exception. Some of the difficulties he had to encounter were in the form of hostility to the new school on the part of some of the prominent visiting staff of the hospital, but Flint had gathered together a strong faculty and completely ignored the unfriendly attitude of the dissenters. The interest which Dr. Flint manifested in his work at this time is well shown by the following quotation from an article by one of his students: "At this time, 1851, he read his lectures and they were listened to with interest and always by the entire class. No one more fully appreciated hospital advantages as offering the opportunity for medical improvement than he at this time, and indeed throughout his whole life. He had previously made use to the best advantage of the clinical opportunities which the old almshouse afforded, and now he had the privilege of studying diseases among a better class of patients and with better surroundings. During my stay in the hospital every case in the service of Prof. Flint that possessed any interest was recorded in his note book and his thorough examination of patients, in order that the notes might be complete, necessitated a prolonged stay on his part at each visit to the hospital. The late Professor Bennett of Edinburgh said that a large metropolitan practice is the bane of the profession since it prevents the proper examination of cases and the investigation of subjects which are of interest to the profession. Prof. Flint appeared to have the same belief for he seemed annoyed and disappointed when professional engagements in the city prevented his daily visit to the hospital or compelled a shortening of his stay there."

During the time of his professorship in the medical school in Buffalo, Dr. Flint made one of his most outstanding contributions to the advancement of physical diagnosis in the form of an essay entitled,

"Variations in Pitch, in Percussion and Respiratory Sounds," an essay which won the prize of the American Medical Association for the best original contribution in 1852. The keynote of this essay was the insistence of its author upon the importance



AUSTIN FLINT, SR.

of pitch. The following is a quotation from this essay and states the law upon which Dr. Flint applied this principle to percussion: "An elevation of pitch always accompanies diminution of resonance in consequence of pulmonary consolidation. In other words, dullness of resonance is never present without the pitch being raised."

Dr. Flint was one of the first to notice the increased resistance to percussion over pleural effusions. He described spontaneous pneumothorax more lucidly than Laennec. In relation to auscultatory signs he pointed out that the prolonged expiratory sound of Jackson was inconclusive evidence of incipient tuberculosis unless attended by an elevation in pitch. Furthermore he carefully analyzed the component phases and types of normal breath sounds.

While he was yet in Buffalo, Dr. Flint

was sent to New York City as a delegate from the Buffalo Medical Association to the meeting of the National Medical Convention in 1846 and was subsequently appointed on a committee to report on a resolution by Dr. Isaac Hayes for a uniform and elevated standard of requirements for the degree of M.D. in all the medical schools of United States. This committee submitted its report in Philadelphia in 1847 and at this meeting the name of the organization was changed from the National Medical Convention to the American Medical Association. This report consisted of ten resolutions which are in substance as follows: (1) That it be recommended to all the colleges to extend the period employed in lecturing from four to six months. (2) That candidates for the degree of M.D. shall have attended two full courses of lectures before graduation. (3) That three years be devoted to the study of medicine. (4) That a certificate of pupilage should not be accepted. (5) That the number of professors in medical schools be increased to seven. (6) That candidates shall have devoted at least three months to dissections. (7) That preceptors should avail themselves of every opportunity to impart clinical instruction to their pupils.

Dr. Flint throughout his life was interested in improving the standard of medical education and although all of the ten resolutions embodied in his report were not carried out before his death he kept continually writing and working for that cause.

In 1852 Dr. Flint again decided to move; this time to Louisville. It has been stated that few successful practitioners have moved so frequently but everywhere he went he was able to make his presence felt by his true worth. The one exception to this statement seems to be found in his capacity as Professor of Theory and Practice of Medicine in the University of Louisville, from which position he was removed in 1856, according to Charles Caldwell, "not on account of incapacity but on account of a want of sufficient exertion and self-training."

From Louisville he moved back to Buffalo and took the chair of Pathology and Clinical Medicine in the school he helped to found. This time he stayed for only two years and in 1858 went to New Orleans as Clinical Professor of Medicine in the Med-

ical School there and as visiting physician to the Charity Hospital. He continued in this capacity for the next three winters, returning to Buffalo during the warmer seasons of the year; and finally in 1860 took up a permanent residence in New York City which he maintained throughout the rest of his days.

During this period characterized by his frequent migrations from the extreme north to the southern part of the country he was ever active as a writer and investigator in addition to his extensive practice as a private clinician. During this time he published articles on diabetes; the pathology of typhoid fever; the epidemic of cholera in Buffalo; on serous effusions into the arachnoid cavity; on pleuropneumonitis complicated with pericarditis; and several other topics. In 1856 he published his book entitled, "Physical Exploration of the Chest and the Diagnosis of Diseases Affecting the Respiratory Organs." In 1859 he published his practical treatise on the "Diagnosis, Pathology and Treatment of Diseases of the Heart," and also "Clinical Study of the Heart Sounds in Health and Disease," which essay again won the prize of the American Medical Association for that year. These last mentioned works were written in the usual clear, concise manner and were the results of long clinical observations. The chapters describing the heart sounds both in the normal and diseased heart are classical and might well be used today as authorities on the subject. Although Dr. Flint was strongly opposed to the use of proper names in designating physical signs, the term "Flint murmur" is in common use today to designate the mitral direct murmur which he first described at this time. His description of the murmur is as follows: "In some cases in which free aortic regurgitation exists, the left ventricle becoming filled before the auricles contract, the mitral curtains are floated out, and the valves closed when the mitral current takes place, and under these circumstances this murmur may be produced by the current just named, although no mitral lesion exists."

With the taking of a new residence in New York City one might say there opened a new chapter in the life of Austin Flint. Although his work was carried on in the same fields, yet he ceased his wanderings which characterized his life thus far and

this fact seemed to lend a decided impetus to his activities. In greater New York he found ample material and opportunities with which to carry on his investigations and still enjoy a large practice as a practitioner of medicine. As ever before he continued to labor incessantly with problems in physical diagnosis and carried on to popularize and perfect this phase of medicine.

Shortly after he had established himself in New York he was appointed as Professor of Pathology and Practical Medicine at the Long Island College Hospital and at the same time became one of the physicians to the Bellevue Hospital and Professor of the Principles and Practice of Medicine in the Bellevue Hospital Medical College. He held these two positions until 1868, when the burden of his many duties forced him to discontinue his connections at the Long Island institution. However, he continued in his capacity as Professor of Medicine at Bellevue until his death in 1886 and was in a large measure responsible for the success and popularity which this school enjoyed during that time. It was in this capacity as Professor of Medicine at Bellevue that he attained his highest achievements and received the highest distinction as physician and teacher. Five years after taking up this new work he published his textbook entitled "A Treatise on the Principles and Practice of Medicine," a work that was recognized as the finest authority on the subject at that time. The book immediately became widely popular among students and practitioners throughout the country and in consequence of this great demand Dr. Flint revised the volume six times and was in the process of preparing a seventh edition at the time of his death. It is said the book sold to the extent of forty thousand copies. Dr. Flint dedicated the first edition of this work to some of his former teachers as follows: "To the Memory of James Jackson, John Ware, and Jacob Bigelow, the spirit of whose oral instructions received during his pupilage, the author has endeavored to follow throughout life as student, teacher, writer and practitioner, this volume is gratefully enscribed." The book contained an introductory chapter dealing with methods of examining patients, symptomatology, a description of the various characteristic facies, differences in pulse and temperature and a small discussion concerning the professional

conduct of physicians, a subject which greatly concerned the author and one to which he devoted considerable time and writing. The body of the book embraced the whole field of medicine. The diseases were divided into general and local and the latter divided again into classes corresponding to the different physiological system—namely, respiratory, circulatory, digestive, urinary, and nervous—and under each class were grouped the diseases whose diagnosis necessitated a differentiation from each other. In the first edition the author gave most space to diseases of the nervous system because clinical and pathological research had recently made great advances toward the recognition and understanding of diseases in this field. An idea can be gotten of the rapidity with which new ideas and discoveries were replacing ancient and incorrect ones at this time by the frequent revisions of this text. In 1881, with the assistance of Dr. William H. Welch, the fifth edition was published and the preface contains the following claim: "That the eliminations, substitutions and additions rendered it essentially a new work." Two years later an appendix to the fifth edition was published so that the public could know about the remarkable discoveries and researches of Koch and others concerning the bacillus of tuberculosis. In 1886, three years later, the sixth edition was published. Like the preceding one, it was prepared with the help of Dr. Welch, whose knowledge of pathology greatly added to the value of the book.

In addition to his many duties and interests as professor of clinical medicine Dr. Flint had many others. He had an extensive practice as a consultant and was in great demand by his fellow practitioners, who recognized his fine judgment and keen ability as a diagnostician. One of his contemporaries later wrote concerning his qualifications as a consultant as follows:

"I can think of no one whom I have met who was more studious of the manner in which he treated a fellow member. There was no snubbing method which is at times adopted, and there was that present which is sometimes wanting, and which made one wish that others might have taken a lesson from him. There was always that careful consideration of what he might say and what influence it might have in the judgment which bystanders might form of the given individual, and, reasoning from this, he was careful of his criticisms of others in the sickroom. It was this, together with his buoyant disposition, with his hopeful aspect and an absence of that funereal method and manner

which some have, which made him so favored as a consultant, and which made his visit to the sick-room not a thing of gloom but a ray of sunshine."

The great enthusiasm with which Professor Flint studied his cases of disease made him extremely popular among his students, and this is as true of his later years of teaching as of his years at Buffalo and New Orleans and Chicago. Likewise it was this characteristic which enabled him to keep abreast of the times and in many instances to forge ahead of the times, as it were.

The respect and esteem with which his fellow practitioners regarded Professor Flint was shown by his selection as orator of the New York Academy of Medicine in 1868, his election to the vice-presidency in 1872, and in the following year by his selection as president of the Academy. His predecessor, Edmund Peaslie, made the following assertion to the newly elected Professor Flint: "We have always found you the high-minded and sympathetic man and the genial gentleman as well as the finished scholar, the distinguished author and the skilful practitioner." It is recorded that during the two years of his presidency the Academy prospered and that the papers read by the various members were of unusual quality. Doctor Flint himself contributed to the scientific work of the Academy by giving several papers of fine quality, among which were: "The management of pulmonary tuberculosis with special reference to the employment of alcoholic stimulants," "Discussions on the etiology and pathology of Bright's disease," and "Discussion on Doctor Loomis' paper on typhus fever." This latter topic was one which had interested him in his early days at Buffalo when he had very brilliantly made a differentiation between cases of typhus and typhoid fever and had recognized and described a few cases not belonging to either the typhoid or typhus group and which later were proven to be relapsing fever.

At the expiration of his term of presidency his reputation as a practitioner and teacher of medicine kept steadily mounting, with the result that he was sent as a delegate to the International Medical Congress in 1881, which met in London, and there read a paper entitled "The Analytical Study of Auscultation and Percussion with Reference to the Distinctive Characteristics of the Pulmonary Signs." This paper attracted so

much attention and seemed so suggestive and valuable that a committee was appointed at the suggestion of the brilliant Mahomed to report on a uniform nomenclature of auscultatory sounds in the diagnosis of disease of the chest. Doctor Flint was made chairman of this committee and its report was made at the next meeting of the Congress at Copenhagen in 1884. At this same meeting in 1881 Doctor Flint was made an honorary vice president of the International Congress. At the meeting in Copenhagen Doctor Flint was elected president of the International Medical Congress, which was to meet again in Washington in 1887, but death intervened.

In 1883, at the meeting of the American Medical Association in Cleveland, Ohio, Doctor Flint was elected president for the following year, although it is stated he neither sought nor desired the office. In this capacity the following year in Washington he delivered a masterly address before the assembled members of the association. It was given just thirty-eight years after the meeting of the National Medical Convention, the precursor of the American Medical Association which met in New York in 1846 and to which Doctor Flint was an original delegate, and opened with the following words:

"The American Medical Association has reached an age when the thoughts of one whose retrospections extend to its birth naturally revert to the natal period of its existence. Of those who coöperated in the formation of the Association and the motives which led to its formation, not many now remain, and after a few more annual meetings all will have passed away."

He then enumerated the objects of the Association and the motives which led to its formation. It will be remembered that he was made a member of a committee at the first meeting to make suggestions for raising the standard of medical education in the United States and that his committee replied in the form of ten well worded resolutions. At this meeting 38 years later Doctor Flint again spoke on the subject of medical education and raised the question of what the Association can do to more and more promote the standards of medical education. He stated that this could not be done by decrying the status of the profession in this country as unworthy of commendation and as contemptible as contrasted with the educational advantages of other countries. He

is quoted as saying "as a body the members of our profession in this country are neither ignorant nor in any respect unworthy. The profession is honorable and honored. In no other country is the social status of its members higher."

At the first meeting of the American Medical Association, in 1847, a code of ethics was adopted by unanimous vote of all present. It was specified at this time that any local medical society not adopting this code could not be recognized as being a member of the American Medical Association. All went well until 1882, when the New York Medical Society by a vote of 52 out of 70 decided to adopt a new code of ethics not in accordance with that of the American Medical Association. Doctor Flint was a member of this society and was one of those voting against the new code. This action was greatly resented by Doctor Flint, as it automatically barred the New York Society from further membership in the A. M. A. As a consequence Doctor Flint resigned from the New York Medical Society and in the following year was instrumental in organizing two other local medical societies, namely, the New York County Medical Association and the New York State Medical Association, and from this time until his death he was an active member of both societies, contributing several papers and in general taking a lively interest in their welfare.

Doctor Flint was an earnest and wholehearted advocate of the code of ethics as adopted by the American Medical Association at its first meeting and did everything in his power to uphold the code and to keep it from being altered or abolished. The section of the code which caused most of the dissension was the one concerning consultations. The code specified that a practitioner of medicine should not call into consultation anyone not of the regular profession, assuming that all others were not properly qualified to act as consultants. In his presidential address of 1884 Doctor Flint voiced his views on the code, which reads, "But no one can be considered as a regular practitioner or a fit associate in consultation whose practice is based on an exclusive dogma, to the rejection of the accumulated experience of the profession and of the aids actually furnished by anatomy, physiology, pathology and organic chemistry." Dr.

Flint contended that members of the homeopathic, eclectic, botanic, etc., schools could not qualify as regular practitioners because they rejected the accumulated experience of the medical profession and the aids furnished by anatomy, physiology, pathology and organic chemistry. The opinions of Dr. Flint upon the code question were published in the New York Medical Journal at the time when the medical profession was taking sides in the matter. His arguments for maintaining the code unchanged were very convincing and forceful and undoubtedly exerted strong influence in the settlement of the matter. It was shortly after this time that Dr. Flint, as president-elect of the International Medical Congress, was going forward with preparations for the next meeting in 1887. Although the profession was somewhat disrupted over the code question, Dr. Flint went ahead as if there were no code question at all, eager and anxious to keep medico-political influences out of the organization of the Congress. It is stated by Dr. Jacobi that the demoralization and disruption of the profession over the code question caused Professor Flint the greatest possible pain and occasioned many of the unhappiest days of his life.

Along with the great honor bestowed upon Dr. Flint as president of the International Medical Congress there came another in 1885 in the form of an invitation to deliver the address on medicine at the next meeting of the British Medical Association, an honor never before bestowed upon an American. But, as in the case of the former, death prevented his appearance in England. The high esteem with which Professor Flint was held throughout England is shown by an article in the British *Lancet* lamenting the fact that the narrow restrictions upon medical practice in the United Kingdom virtually shut out such men as Austin Flint and Trousseau.

The sudden death of Austin Flint by cerebral apoplexy seemed to come as a fulfillment of a wish made earlier in life in which he dreaded a slow and lingering death. The end came on March 13, 1886, just a few days before the annual graduation ceremonies of Bellevue Medical College. The occasion, ordinarily one of great celebration, was appropriately turned into a memorial service for the beloved and respected teacher. The funeral service was

held at Christ Church on March 16, and was attended by a vast gathering of physicians and friends who came to pay a last tribute to their friend and associate. Interment was subsequently made in Boston.

At the time of his death Professor Flint was in full possession of his splendid powers and was fully occupied with his hospital, college, consulting and literary work up to the very last. The night before his death he attended a medical meeting which lasted until midnight, and the cerebral attack occurred shortly after he was taken home. He had no family except a wife, whom he married in 1835, and a son, Dr. Austin Flint, Jr., born in 1836, who attained considerable distinction as a professor of physiology. As an item of passing interest I might mention that a colored servant of Austin Flint, Jr., was in full possession of a classical Austin Flint murmur.

Physically Dr. Flint was of a lofty stature, had a powerful and symmetrical body, a large brain, brilliant, clear, dark hazel eyes, regular features, a very cheerful expression, was quick in motion, had well preserved and harmoniously working organs. He was a systematic, diligent student, a steady professional worker, fond of proper recreation, punctual in his engagements, self-sacrificing, a wise counsellor to the rich and a true friend to the worthy poor. In his home Dr. Flint was the considerate, indulgent and kind husband and father. Mrs. Flint contributed much by her talents and affection to cheer and assist him. She was his constant companion throughout his many trips at home and abroad and was indeed made happy when a permanent residence was established in New York on Fifth Avenue.

In the history of American Medicine Dr. Flint will always be remembered as the eminent clinician as well as the brilliant teacher and writer. Probably his most valuable contributions have been those relating to the use of auscultation and percussion, and, in general, to the disease of the respiratory tract and heart. As has been stated, he was the first to point out the importance of pitch in percussion. He was the first to use the terms and to describe clearly vesiculo-tympanic resonance and broncho-vesicular respiration. He was the first to point out the value of the sounds produced by the whispered voice. He did more

by his teachings and writings than anyone else in this country to render popular the methods of exploration by physical signs.

He contributed much to the natural history of disease and placed upon a firm foundation the doctrine of the self-limitation of many diseases. It is conceded by many that he was the first to recognize the relationship of achylia gastrica and pernicious anemia. He was a profound admirer of the French clinician, Louis, and was an ardent advocate of the method of analytical study of clinical cases, although he did not by any means limit himself to this method. An important and valuable feature in his method of teaching was to require students to make an independent, thorough and systematic study of cases of disease and to furnish full clinical reports of these cases, a method enjoying not a little bit of popularity today. This was done in order to teach a proper method of clinical examination, to inculcate the habit of keeping clinical records and to improve the powers of observation for, as Dr. Flint has said, "The ability to observe correctly is not a natural gift, nor does it accompany, as a matter of course, the acquisition of knowledge from reading or didactic lectures. It is an art to be acquired." Professor Flint was truly a master of this art and became so largely through his lifelong practice of taking careful notes on every case and allowing ample time to pure observation.

In his writings Dr. Flint covered subjects in all departments of internal medicine. In addition to his monumental work upon "The Theory and Practice of Medicine" he published a large number of valuable monographs, among which may be mentioned those on continued fever, dysentery, diseases of the respiratory organs, diseases of the heart, phthisis, physical diagnosis, clinical medicine, and conservative medicine. He lived during the period of the infancy of the germ theory of disease and was quick to recognize its sound principles and value. He predicted that in the future the etiologic agents of many diseases, then unknown, would be brought to light on the basis of this new theory.

The true greatness of any man can well be measured by his achievements. A few of the more outstanding ones attained by Dr. Flint may be mentioned: Professor of

Medicine in seven ranking medical schools; founder and editor of one medical journal; president of the American Medical Association and of the International Medical Congress; founder of several local medical societies; author of several texts of medicine and a contributor to many medical journals.

Austin Flint was ranked as the ablest clinician of his day. Samuel D. Gross has left to posterity the best tribute to him: "Tall, handsome, and of manly form, with a well modulated voice of great compass, he

is a lecturer at once clear, distinct and inspiring. During his hour in the classroom no student ever falls asleep. He ranks high as a clinical instructor. As a diagnostician in diseases of the chest he has few equals. Nor is this fact at all surprising when we bear in mind the time and the immense labor which from an early period of his professional life he has devoted to their investigation. I know of no one who is so well entitled as Austin Flint, Sr., to be regarded as the American Laennec."

MICHIGAN'S DEPARTMENT OF HEALTH

C. C. SLEMONS, Dr.P.H., M.D.,
Health Commissioner
LANSING, MICHIGAN

THE YEAR'S WORK

Michigan's communicable disease record for 1931, judging from the returns for the first ten months of the year, will show the lowest diphtheria rate in the history of the state, a low incidence of smallpox, fewer deaths from scarlet fever than usual, and an epidemic of poliomyelitis.

The low diphtheria incidence is undoubtedly due in part, at least, to the widespread immunization that has been carried on throughout the state for the past ten years. During 1931, counties with full-time health departments and cities with full-time health officers have been especially active. In many of the other counties, local physicians have immunized thousands of children, with assistance from the Michigan Department of Health in organization of the campaigns.

Smallpox incidence has been low, with 887 cases reported as compared with 2,286 for 1930 and an average of 1,641 per year for the past five years. The bureau of epidemiology has followed the policy of endeavoring to arouse interest in vaccination wherever one or more cases of smallpox have appeared. Health officers and physicians have been notified promptly by bulletins of the appearance of cases in their section of the state, and have been kept in touch

with developments. Health officers have been urged to use every means of publicity available and to secure as many vaccinations as possible. Such campaigns of education have on two occasions included several counties. Newspapers have been a valuable aid in advising people of the existence of smallpox and urging vaccination.

Deaths from scarlet fever totalled 108 for the first ten months of the year as compared with an average of 171 for the last five years, although the number of cases during the year has been high. Undoubtedly the increase in cases has been due in part to added care in the discovery and reporting of mild cases.

Better follow-up of typhoid fever cases and carriers has been made possible by the establishment of a new system of filing in the bureau of epidemiology. It is believed that eventually the system will aid in cutting down the residual or sporadic cases of the disease. The object of the plan is to find new carriers developing from recent cases and to keep in touch with old carriers. Considerable field work has been involved in the investigation of cases and carriers.

The outstanding epidemiological event of the year has been the outbreak of poliomyelitis. The organization of the Michigan Commission on Infantile Paralysis made up

of representatives from ten organizations concerned with the health of children was a direct result of this epidemic. The Commission's work in disseminating information and advice to the public, in educating physicians, in collecting blood of recovered cases for serum, and in aiding physicians in diagnosis and treatment is too familiar to need comment. The total of cases of poliomyelitis for the year, up to December 12, was 1,128 and the number of deaths to November 1 was 96.

Rural health administration has made progress during 1931. There are now 14 district and county health departments furnishing full-time health service to 26 counties. Agencies coöperating in the financing of these departments include the United States Public Health Service, the Rockefeller Foundation, the Children's Fund of Michigan, the W. K. Kellogg Foundation, the state, boards of supervisors, and cities. Because of lessened income from taxes, many counties discontinued other projects, but every existing county health unit was maintained.

The training station for health officers maintained by the Michigan Department of Health in coöperation with the Rockefeller Foundation has had four physicians in training at different times during the year.

RECORDS AND STATISTICS

There has been increased activity in the bureau of records and statistics during 1931. The Legislature of 1931 enacted three laws that directly affected the work of this bureau.

Probably the most important law was the provision for the registration of unreported births. In the absence of any law on this subject, many difficult situations had arisen. The new law provides that where a birth was not recorded in the proper way at the time, it may be registered through the probate court.

In the administration of this law, the bureau of records and statistics permits physicians who were in attendance at a birth to file a delayed report. If the physician is not available, or if, for some reason, he will not file a report, the birth may be registered through the probate court. As the probate court has judicial authority to examine evi-

dence and determine facts, this is a very satisfactory method of registration. The number of registrations has been large.

The new law which put fees for copies of records on a more satisfactory basis makes it possible to determine the proper charge without question.

For some years it has been the practice of the bureau of records and statistics to send each month a transcript of deaths of non-residents to the local registrar of residence. Beginning with the first of January, 1931, this practice was changed and these registrations were sent to the county clerk. The 1931 Legislature passed a law providing for this service. It has also been the practice, coöperating with other states, to send transcripts of non-resident deaths to the state registrars in the case of out-of-state residents. Steps are now under way to provide for such distribution through the United States Bureau of Census, and if this plan is adopted all reports of out-of-state deaths will be sent to Washington and distributed from there to the various states.

Under a coöperative arrangement with the Department of Public Safety, the bureau of records and statistics now furnishes to that department a memorandum of all deaths due to traffic accidents.

The usual volume of record keeping has been handled in the bureau during the year. Since marriages and divorces are incompletely reported at irregular intervals it was not possible to estimate the number of these, but reports of births, deaths and cases of communicable disease for the first ten months of 1931 have been received as follows:

Births	75,783
Deaths	41,190
Cases of Communicable Disease.....	76,796

LABORATORY SERVICE

Laboratory service to aid in the diagnosis of communicable disease has been given to more than 3,000 physicians during 1931. The largest single item of service was in the serum diagnosis of syphilis; over 100,000 such examinations were made. The total number of examinations made by the three laboratories of the Michigan Department of Health, at Lansing, Grand Rapids, and Houghton was 312,710. More than 100

different scientific procedures were in constant use in the diagnostic laboratory.

The principal increase in work came in the Division of Sanitation. Analyses made of roadside and resort drinking waters and the chemical and biological tests run for the Stream Pollution Commission increased more than 100 per cent.

The division of biologic products of the bureau of laboratories has continued to furnish diphtheria antitoxin, toxin-antitoxin mixture, and Schick test material for determining susceptibility to diphtheria; scarlet fever antitoxin, scarlet fever toxin for active immunization, and Dick test material for determining susceptibility to scarlet fever; typhoid vaccine; smallpox vaccine, and silver nitrate ampules. Bacteriophage is also furnished free to physicians and Kahn antigen for the serum diagnosis of syphilis is supplied to laboratories in Michigan doing this test.

Three new products for the control of communicable disease will be added to this list beginning January 1, 1932, material for the tuberculin test, citrate solution for whole blood immunization against measles, and toxoid to replace toxin-antitoxin for immunization against diphtheria. Before toxoid could be distributed, the laboratory had to be thoroughly renovated, additional equipment added, and improvements made so that efficiency would be increased to take care of the extra work necessary in making toxoid. This revamping of the laboratory is now complete.

Technical investigation for the improvement of laboratory service has been carried on constantly during 1931.

SANITATION

Improvement in public water supplies has continued during 1931. Three new filter plants were placed in operation during the year, at Dundee, Blissfield, and Grosse Pointe Farms, bringing the number of such plants in the state to 33. Fifty public supplies are being treated with chlorine, serving a population of almost half a million.

Special effort has been put forth by the bureau of engineering to abolish the few potentially dangerous public water supplies remaining in the state. Seven towns have recently made changes that insure a safe

supply. Fourteen other towns have been ordered to improve their supplies. When these orders are complied with, all of the public water supplies in the state will be safe, with the exception of those in one or two communities where natural and financial conditions make the securing of a safe supply practically prohibitive. The greater part of the work of safeguarding public water supplies has been done during the last twenty years.

Michigan's program of insuring safe drinking water for highway travelers completed its sixth year in the summer of 1931. Approximately 1,900 roadside sources of drinking water were inspected, which entailed traveling 7,200 miles on trunk line highways. The percentage of safety has increased from 63.7 in 1925 when the work was started to 86.4 in 1930.

Resort inspectors visited approximately 2,000 resorts during the past summer, covering every county in the state. Definite improvement over preceding years was shown by the rating of the resorts.

Sewage treatment plants have been completed or are under construction in four municipalities and bonds for this purpose have been voted in a fifth. Eight cities have done extensive preparatory work in sewer construction. Especial effort has been put forth by the state to bring sewage disposal facilities at state institutions up to the legal requirements.

EDUCATIONAL MEASURES

Three bureaus of the Michigan Department of Health—child hygiene and public health nursing, education, and mouth hygiene—have carried on varied educational campaigns. A special series of hygiene lectures was given in the 49 county normal training classes to 1,934 students. More than 5,000 people heard lectures on mouth health and 32,705 listened to general health talks. In answer to 6,817 letters received in the Department, a total of 335,686 bulletins was sent out. Demonstration work in prenatal nursing resulted in 10,795 home calls upon mothers. Classes in child care for girls were conducted in 214 rural schools with an enrollment of 41,804, and classes for women were held in 144 communities with a total attendance of 13,120.

THE JOURNAL

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FEBRUARY, 1932

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon

EDITORIAL

THE STATE DUES

It is characteristic of all of us in times of financial stress to wonder if dues paid to organizations remote from our immediate surroundings are worth what we get out of them. We feel the necessity of local taxes but when we come to those paid the state and the nation we wonder if the burden might not be lessened by further economy away from home.

This editorial, however, is concerned only with the medical situation. There should be no question and doubtless there is none in the minds of the profession in regard to the necessity of the State Medical Society

and the American Medical Association. In the first place a dollar and a half of our dues goes into the subscription to this Journal. It has been the endeavor of the council and the publication committee who have immediate control to make it equal to the best in the United States. Whether they have succeeded or not the reader must decide for himself.

A dollar and a half goes for defense of the members in malpractice or threatened malpractice suits. With the depression these are becoming more numerous, almost an epidemic as it were. Five have been reported in one county of the State, and that not by any means one of the more populous counties. In one month attorney's fees paid out by the State Society have amounted to over \$1,200. So serious has the situation become that the various medical protective insurance companies have considered the advancing of premiums from \$8.00 to \$10.00 over what members have been accustomed to pay for such protection. Membership in the State Medical Society entitles one so charged to defense through to the supreme court if necessary, but for very obvious reasons the Society cannot undertake to pay damages in the instance of an adverse verdict. The matter of medical defense is more important to the physician today than it ever was. No one is exempt from the possibility of a charge of *malpraxis*. We are forced to the conclusion that in the matter of security alone no one can afford to let his practice go unprotected. To do so might be the ruination of his life accumulations and reduction to penury.

But this is not all. One dollar and a half goes towards post-graduate clinics. So progressive is medicine that it demands continued efforts in the way of study to keep informed in regard to the advancements in professional knowledge. There is no finality in science, to say nothing of medical science. Post-graduate study at such intervals as the physician can afford must be considered as part of his professional duties.

For a graphic account of the activities of organized medicine in the county, state and nation the attention of the reader is directed to the January number of this Journal, pages 60 to 65. These illustrations afford a profitable study of the services rendered the individual member of the profession by organization.

THE WAYNE COUNTY MEDICAL SOCIETY

The Wayne County Medical Society has moved to its new home, 4421 Woodward Avenue, Detroit. As announced in the December number of this JOURNAL, negotiations were entered into with David Whitney estate whereby on very generous terms the medical society have secured the Whitney mansion as a club house. The weekly meetings, however, are being held in the auditorium of the Maccabees Building as has been the custom for the past five years. Regarding the history and description of the building the Bulletin of the Wayne County Medical Society comments as follows:

"The magnificent Whitney home was built in 1893 by David Whitney, Jr. The house was occupied by members of the family until the death of Mrs. Whitney in 1917. Since that date, the huge house has been occupied only by servants, who kept it in such condition that it could have been occupied at any moment. The Whitney Estate managers have redecorated the entire building and spent several thousands of dollars arranging a heating control system, all for the benefit of the Wayne County Medical Society.

"The palatial rooms with hand carved woods and beautiful marble mantels have been tentatively arranged for the Society's uses. The drawing rooms will be utilized as the lounge; the library will become the executive offices; the dining room and music room will be given over to the diners; the den and office will be used for committee purposes; the large kitchen with its three stoves and built-in grill will be ample for serving one hundred or more physicians and surgeons who are expected to take luncheon in the new headquarters every day."

The commodious building will afford room for expansion as well as increase in the activities of the Society, and concerted effort on the part of all members of the medical profession was never more necessary than it is today. There are many things to be undertaken, abuses of privilege to be corrected. In a large metropolitan city things move rapidly and the medical profession is affected adversely sooner than the profession in smaller centers or in the rural portions of the country where industrialism, with its attendant evils, is less felt. The social and economic problems present

themselves first in the large centers of population and it is here that they must be met and solved and whatever solution or compromise that is effected must serve as a precedent elsewhere. The Trustees of the new Wayne County Medical Club extend a perennial welcome to members of the Michigan State Medical Society to make free use of the club when in the city. The dining service has been and will continue to be second to none in the State and in making this statement we have in mind the more costly and seclusive lay clubs. Come and get acquainted. Every member of the Michigan State Medical Society is invited to attend the scientific meetings held every Tuesday evening in the auditorium of the Maccabees Building, corner of Woodward and Putnam Avenues.

TAXATION

The writer's only qualification to deal with this subject is the fact that, together with other members of the medical profession, he has had to pay almost every conceivable tax that has been levied on the holdings and income of this class of citizen. His excuse is the fact that there is perhaps no more pressing subject with which we have in some form to concern ourselves. It may be said further that this is a personal attitude which is not intended to commit the JOURNAL to any definite policy on the subject of taxation.

Taxes are a necessity; this no thoughtful person will deny. Furthermore, no problem has concerned our elected representatives, whether in city, county or state, more than this. In exercising the taxation power they have not always shown the best wisdom. The tendency in many instances has been to follow the line of least resistance, to tax real property that is most stationary and therefore most easily accessible.

One of the most pregnant statements ever made is, "The power to tax is the power to destroy." So unwisely has this power been exercised that in many instances efforts have been made to dispose of real estate, but prospective buyers have become fewer and fewer until the value of real estate has reached, in many instances, the vanishing point. This is true of much good (so far as natural endowment is concerned) farm land. It is absolutely worthless so far as any

adequate financial return is concerned. Nor is this true of farm land alone. In the cities, acres of buildings have been wrecked and the ground turned into parking space. This is true even on Woodward Avenue, Detroit, perhaps the most valuable thoroughfare in Michigan.

Our contention is that the tax should be as democratic as the vote. It should include all luxuries such as tobacco (the writer is fond of a good cigar), gasoline (which we also use), amusements (not so much). The sales tax is also democratic and worthy of consideration in as much as one pays as he buys. This should relieve the home to a large extent, and the home should be protected. When the home is gone the family is cast adrift, which is one of the most unfortunate circumstances that can befall human beings. Civic and national undertakings such as public utilities, as street railway transportation and the post office, should be made selfsustaining.

We are simply announcing a principle in taxation that might be followed with advantage by city, state, and nation. It would go a long way towards relieving the home owner, be he farmer or city dweller.

In the efforts to cut down the costs of government our representatives, whether city, county, state or nation, find themselves handicapped by certain large expenditures which have been called "fixed charges." Of fixed charges so-called the United States Government must include \$2,263,000,000 in its 1932-33 budget. This represents 55 per cent of the entire cost of government.

For the State of Michigan the aggregate gross debt according to the census bureau amounts to \$94,903,000 while the net debt which represents the fund and floating debt minus assets in general sinking funds amounts to \$64,316,000.

Our cities have their own "fixed charges"; in the instance of Detroit it amounts to \$380,000,000 which must be retired at the rate of \$32,000,000 each year, including interest; in other words this fixed obligation will cost Detroit one dollar a second throughout the year 1932. Other cities might have a similar story to tell.

A large portion of these fixed charges is the result of voting for improvements and extension of public service and privilege by persons who thought they were voting the cost on the other fellow. Democratization

of the tax in keeping with the democratic vote would have obviated a goodly amount of these so-called fixed expenses of government.

"The pressure of untaxed and more or less unpropertied millions on national Treasuries inevitably leads to far more serious troubles than the raids of a few courtiers or placemen," says James Trustlow Adams.

The writer wishes it distinctly understood that he is not an advocate of higher taxes but of such a distribution of tax responsibility as will dispose a larger number of people to feel its importance when it comes to the expenditure of public funds. This cannot be accomplished by confining taxes to comparatively few and exempting the many. Had such a policy been inaugurated years ago, greater caution would have been exercised in the matter of so-called public improvements and we would not have found ourselves in the predicament which faces all departments of public activity at the present time.

THE CANCER COMMITTEE

In this number of the Journal appears the supplementary report of the Cancer Committee of the Michigan State Medical Society. This report contains a number of state maps that are worth careful study, presenting as they do in a graphic way the cancer situation in this state.

The information presented is the result of replies from questionnaires mailed county secretaries throughout the state. The report shows the findings of the first survey of the kind to be undertaken. It is important as showing also the deficiencies in the various counties as they are at the time. It will be interesting to compare subsequent surveys with the present and we hope that it will be an incentive to fill in the vacant spaces of those counties and districts in which facilities for the apprehension and control of the disease are inadequate.

THE TREND OF POPULATIONS

According to recent statistics the population of France is 41,835,000, a gain of two million over the census of 1921. The ratio of population of France to that of Germany today is 42 to 64, counting in millions; at the beginning of the war it was 40 to 70.

In other words the pre-war margin of population between the two countries was 30 million; today it is 22 million. At the outbreak of the Franco-Prussian war (1870) the populations of the two countries were nearly equal.

It would seem that there is a definite relation between population and the operation of economic forces. In fact Malthus was one of the earliest to make the observation that there is a very responsive relation between population and food supply. There has been a world-wide decline in birth-rate. A revision of forecasts regarding the future populations of nations and the estimates have been for the most part downward. The forecasters see the population of Germany stabilized by 1945.

The United States has also participated in the decreasing birth-rate. Subtracting the infant mortality from birth-rate, 22.5 children per thousand of population reached the age of one year in 1916 and less than 20 per thousand in 1926. Some statisticians predict that according to the present decreasing rate the population of the United States will become stationary by 1970. Owing to restricted immigration the influx of immigrants of the earlier years of this century has been decreased from 1,000,000 a year to approximately 150,000 at the present time.

The subject of birth control has been discussed widely both in this country and in Europe. However, nature has a way of taking care of the problem of population in its widest biological sense, that is not always the most comfortable to sensitive human beings, in spite of the efforts of scientific medicine to frustrate the principle of the "survival of the fittest."

A BIT OF ANCIENT MEDICAL HISTORY

The great epics of the Greeks such as the Iliad and Odyssey have been found by archeologists to have had a historic basis in the extinct civilizations of Troy, Mycenæ, and the largest, the Minoan in Crète. Crete has been said to be a "half way house between two continents." It was the starting point of European civilization. Minoan culture lasted over 2,200 years, a period of time equal to that from the rise of Athens to our own time. The Minoans left no writings that so far are intelligible to modern

interpreters, but excavations about the palace of Knossos (1600-1200 B. C.) reveal evidence of sanitation, a drainage system excelled only by the Romans of much later times. There have been discovered huge pits for the purpose of disposing of city sewage and garbage. The palace was equipped with ornate bathrooms showing the attention paid to personal hygiene. During this time the rest of Europe was inhabited by barbarians of the Bronze Age. Sanitation, which is usually the latest achievement of civilized peoples, was recognized by these inhabitants of Crete over 3,000 years ago. There is a possibility that the sanitary and personal hygienic practises of the Minoans had an influence later upon the Greeks, though no intelligible written records exist at the present time to substantiate this. A name associated with the excavations at Knossos is Sir Arthur Evans,* whose work is as thorough and notable as that of Schliemann of Troy or Woolley of Ur.

* * *

The ancient Greeks were a composite people consisting of Dorians, Thessalians, Achaïans, Aeolians and Ionians. They were both mountaineers and seafaring people, a fact which made for restless independence. But this very characteristic later led to their downfall for the Greek had no conception of other than city state. They never learned that in union there is strength. The origins of the Greek civilization go back about 3500 B. C. to such places as Troy and Mycenæ. This was the age of polytheism. Every little clan or village worshipped its special god while at the same time they showed a vague general reverence for the greater gods. The names of the gods are familiar to every school boy. The chief god of healing among the Greeks was Apollo, the averter of ills. He was the physician to the Olympian gods, whose illness he cured by the root of the peony. Æsculapius was the son of Apollo. Æsculapius became so efficient in the art of healing that he was accused by Pluto of diminishing the inhabitants of hades. His followers constituted themselves a cult or guild known as Asclepiads. A number of temples were built to this cult, the most famous of which were those at Cos, Epidaurus, Cnidus and Pergamus. "These temples," according to Garrison, "became

*Accounts of Evans' discoveries in Crete appear in Garrison's *History of Medicine* and in *six centuries of Health and Physic* by Stubbs and Bligh.

popular sanatoria managed by trained priests, not unlike the health resorts of modern times. The patients were received by the priest-physicians, who stirred their imaginations by recounting the deeds of Æsculapius, the success of the temple treatment and the remedies employed." The temples were located on hills and amid groves and often near mineral springs. The cures effected were largely due to rest and favorable environment.

Hygeia and Panacea were the legendary children of Æsculapius. They assisted in the temples and fed the sacred snakes. The ancient Greeks as well as the Egyptians, Cretans and Hindus venerated the serpent. Æsculapius is often represented with a rod around which a snake is entwined. Hence the early origin of the serpent as symbolic of the healing art. The sons of Æsculapius were Machaon and Podellirius, the first surgeons accompanying the military expeditions described in the Iliad. Of Machaon, Homer writes, "O Neleian nestor, great glory of the Greeks, come, ascend thy chariot and let Machaon mount beside thee; and direct thy solid hoofed horses with all speed toward the ships, for a medical man is the equal of many others, both to cut out arrows and to apply mild remedies."

* * *

Greek medicine before the time of Hippocrates had a triple relationship with science, with gymnastics and with theology.

The Grecian period of medicine may be conveniently divided into three epochs, namely, the pre-Hippocratic, the classical period of Hippocrates and his school and the Greco-Roman period. The period of Greek influence upon medicine extended over approximately eight hundred years, from 600 B. C. to the death of Galen 200 A. D. We have drawn attention to the mythical age of Greek medicine when magic prevailed. About the seventh-sixth century B. C. Greek thought becomes clear and definite, devoid of mysticism, and no longer hampered by idea-arresting magic. As one writer proclaims it, "With sure and serene wisdom untrammelled by the heavy cloak of magical theory, tradition or tabu they (the Greeks) practised a system of medicine so soundly based that modern medicine owes it a debt whose value can hardly be exaggerated. In fact we appear to emerge with the abruptness of a train coming out of a tunnel from the noisome darkness of

superstition into the healthy sunshine of science."†

The Latin poet Lucretius has expressed the Greek influence upon medicine even more strongly in verse:

"Out of the night, out of the blinding night
Thy beacon flashes;—hail, beloved light
Of Greece and Grecian; hail for in the mirk
Thou dost reveal each valley and each height."

* * *

We come now to the Hippocratic or classical period. In spite of the fact that the great Father of Medicine was contemporary with the great dramatists, philosophers and artists of the Golden Age of Greece, yet little is definitely known of him as a personality. He was born on the island of Cos about 400 B. C. The date of his birth has been also given as 460 B. C. His age has been given as 90 years to 110. He was the son of an Asklepiad and a pupil and later a teacher in the medical school of Cos. He travelled widely for the times and practised his profession. His fame was beyond description. In fact he became almost a deity.

Plato writes of him as a member of the guild or society known as the Asclepiadæ. It is possible that he was a wide traveller. A biography by Soranus* in the second century fails to give any important details in regard to his life. Aristotle mentions Hippocrates only once in his politics and Plato, who was a younger contemporary, mentions him only twice in his dialogues.

Early in the history of the Alexandrian Medical School (circa 300) a group of medical works that has since become known as the Hippocratic collection were placed into circulation. Hippocrates was held in so great

†Six Centuries of Health and Physic. By Stuhbs and Bligh.

*Soranus, the first biographer of Hippocrates, lived during the reign of Hadrian (A. D. 117-138), about twenty years before Galen, who held him in great esteem in spite of the fact that he belonged to a post-Hippocratic cult known as Methodists. It might be stated here that the Methodists were a Greco-Roman school of the first century B. C., who attempted to steer a middle course between the dogmatists and the Empirics. They held that there were certain symptoms common to many diseases. In all diseases there was decrease or increase of secretion or excretion due to dilatation or constriction of the parts of the body; hence treatment consisted of laxatives or astringents and patients were classed accordingly—hence the name Methodist. Disease was an independent entity to be dealt with apart from individual peculiarities. The Methodists despised anatomy. The sect attracted the practical mind of the Roman. Withington states that the fact that so many of the Methodists were distinguished as "ladies' doctors," shows that women were attracted to the new system. These facts accounted for its vogue during the pre-Galenic period. The fame of Soranus, however, rested not so much upon his inadequate biography of Hippocrates as on his general skill and knowledge as a physician, chiefly upon his knowledge of gynecology. He received his education in the later Alexandrian school. Only fragments of his work have survived the centuries. The invention of printing, while an untold blessing to man, was the cause of the destruction of many valuable manuscripts.

veneration at the time that into this collection was placed anything thought valuable, irrespective of its real authorship. The genuineness of some of these works was early suspected. Among the number to engage in critical study was Galen, who lived over five hundred years after the death of Hippocrates. Even during this interval the so-called works of Hippocrates had undergone change through accretion and through loss. The earliest manuscript is of the ninth century A. D., but the earliest translation is in Latin of the seventh century A. D.

Two schools of medicine were early founded, namely that associated with the peninsula of Cnidus, and one some time later on the island of Cos. It is with the Coan school that the name of Hippocrates has been intimately associated throughout the centuries. The Coan and the Cnidan schools represented difference of medical opinion even at this early time. Hippocrates was, however, considered above sectarianism in medicine. He was, according to Celsus, the first to separate medicine from philosophy. In other words he observed and drew his conclusions from his observations without being influenced by any preconceived notions.

* * *

During the past quarter of a century Hippocrates, or, better, what is known as the Hippocratic collection, has been subjected to investigation by the scientific method or the higher criticism which has proved of such value in winnowing the wheat from the chaff in the study of the Hebrew biblical literature. The Hippocratic collection provides an ideal ground for textual criticism. The consensus of scholarly opinion is that Hippocrates wrote very few of the works attributed to him.

The Hippocratic collection consists of about sixty books dealing with medical and health topics written at various dates within a range of one hundred to three hundred years from the earliest to the latest. According to scholarship only six or seven of the books were written by Hippocrates himself.

The six books of the Hippocratic canon are: I. The Prognostic, which is a work of general pathology with special emphasis on acute diseases. The writer declares that it is an excellent thing for a physician to practise forecasting. In the prognostic is to

be found the famous passage dealing with the signs of impending death.*

"In acute diseases the physician must conduct his inquiries in the following way. First, he must examine the face of the patient and see whether it is like the faces of healthy people and especially whether it is like its usual self. Such likeness will be the best sign and the greatest unlikeness will be the most dangerous sign. The latter will be as follows, nose sharp, eyes hollow, temples sunken, ears cold and contracted and with their lobes turned outward, the skin about the face hard and tense and parched, the color of the face as a whole being yellow or black."

Shakespeare was evidently familiar with the famous passage in the prognostic, for he gives the following description of the death of Falstaff (Henry V):

"You should observe thus in acute diseases; first, the countenance of the patient, if it be like those of persons in health and especially if it be like itself, for this is best of all. But the opposite are the worst; such as these—a sharp nose; hollow eyes; collapsed temples; the ears cold, contracted, and their lobes turned out; the skin about the forehead rough, stretched and parched; the color of the face greenish dusky livid or leaden. If the countenance be such at the beginning of the disease, and if this cannot be accounted for by the symptoms, and if the symptoms do not subside in a day and a night; be it known for certain that the end is at hand."

All of which goes to show how careful Shakespeare was to make use of the best knowledge of his day pertaining to every phase of human life.

Supplementary to the prognostic is the Regimen in Acute Diseases. Then follow the epidemics, Books I and III. The aphorisms contain nuggets of clinical wisdom that were probably the summation late in life of Hippocrates' vast first-hand experience. Withington says, "that they were for ages classed among the most wonderful products of human genius." The total number of aphorisms is 412. They are composed in a style that is almost Baconian in its directness. We have a clear generalization of observed fact. A few are here selected almost at random:

Life is short, art is long, opportunity fleeting, experience treacherous or deceptive, judgment difficult. The physician must be ready, not only to do his duty himself, but also to secure the coöperation of the patient, of the attendants and of the externals.

Old men endure fasting most easily, then men of middle age, youths very badly, and worst of all children, especially those of liveliness greater than ordinary.

*The quotations of the prognostic, the aphorisms and the oath are from what is perhaps the most convenient as well as readable edition of Hippocrates, edited and translated by W. H. S. Jones for the Loeb Classical Library. This edition consists of pages of the author's Greek faced by a page of translation.

Do not disturb a patient either during or just after a crisis, and try no experiments, neither with purges or with other irritants, but leave him alone.

Spontaneous weariness indicates disease.

When sleep puts an end to delirium it is a good sign.

Old men generally have less illness than young men, but such complaints as become chronic in old men generally last until death.

A convulsion supervening upon a wound (*i.e.*, tetanus) is deadly.

Consumption occurs chiefly between the ages of eighteen and thirty-five.

When patients spit up frothy blood, the discharge comes from the lungs.

Kidney troubles and affections of the bladder are cured with difficulty when the patient is aged.

If you give a fever patient the same food as you would give a healthy person, it is strength to the healthy person but disease to the sick.

Ascribed to Hippocrates is also a book on geography, including climatology. This is entitled *Airs, Waters, Places*. And lastly is *The Sacred Disease* which is a discussion of epilepsy and other brain seizures.

* * *

Then attributed to Hippocrates is the famous oath which has been changed by succeeding generations of writers who have interpolated, so that as it stands it is probably largely a production of the third century A. D. The Hippocratic collection as we have already intimated is the work of different schools of medicine, sometimes holding quite contradictory views. There is no one of the books that can be proven beyond a doubt to be by the Father of Medicine.

According to Charles Singer* of the finest books of the Hippocratic collection we can only say that they contain nothing inconsistent with their Hippocratic origin, that their ethical standards accord with the Hippocratic ideal and that they are the work of physicians of great intellectual power and experience.

THE HIPPOCRATIC OATH

"I swear by Apollo the Physician, by Æsculapius, by Health, by Panacea and by all the gods and goddesses, making them my witnesses, that I will carry out, according to my ability and judgment this oath and this indenture.

"To hold my teacher in this art equal to my own parents; to make him partner in my livelihood; when he is in need of money to share mine with him; to consider his family as my own brothers and to teach them this art, if they want to learn it without fee or indenture; to impart precept, one instruction, and all other instruction to my own sons, the sons of my teacher, and to indentured pupils and to no one else.

"I will use treatment to help the sick according to my ability and judgment, but never with a view to injury and wrong doing.

"Neither will I administer a poison to anybody when asked to do so, nor will I suggest such a

course. Similarly I will not give a woman a pessary to produce abortion. But I will keep pure and holy both my life and my art.

"I will not use the knife, not even, verily, on sufferers from stone but I will give place to such as are craftsmen therein.

"Into whatsoever houses I enter I will enter to help the sick and I will abstain from all intentional wrong doing and harm, especially from abusing the bodies of man or woman bond or free.

"And whatsoever I shall see or hear in the course of my profession as well as outside my profession in my intercourse with men, if it be what should not be published abroad I will never divulge, holding such things to be holy secrets.

"Now if I carry out this oath and break it not, may I gain forever reputation among men for my life and for my art; but if I transgress it and forswear myself, may the opposite befall me."

—From W. H. S. Jones' Edition of Hippocrates.

* * *

The so-called Hippocratic writings are probably the remains of the medical library of Cos.

European medicine had its beginning in the age of Pericles when Hippocrates gave Greek medicine its scientific spirit and its ethical ideals as seen in the Famous Oath. As we have inferred, Hippocrates was a contemporary of Sophocles, Euripides and Aristophanes, the dramatists, and Socrates and Plato, the philosophers, as well as the Greek historians Herodotus and Thucydides. He lived at a time when the Athenian democracy was at its best.

Hippocrates crystallized the loose knowledge of the Coan and the Cnidian schools into a systematic science. Some of the best descriptions of disease of the Father of Medicine are models of case history taking even for the physician and medical student of today. According to Garrison, Hippocrates virtually founded the bedside method which has been the distinctive talent of all true clinicians from Sydenham and Heberden to Charcot and Osler. He taught the doctrine of humoral pathology which attributed disease to disorders of the fluids of the body. This has been discarded except that it has its modern counterpart in serotherapy.

WEELUM HAS HIGH HOPES OF THE DOCTORS REACHING HEAVEN BUT WARNS THEM OF HELL

Last nicht ah sat doon in ma easy chair tae enjoy an 'oors readin' afore pittin' mysel intel ma bed. When ah looked on th' second page o' th' paper, ah foond an article aboot a meenister awa oot in Nebraska wha had preached a sermon in which he said ther' wasna ony Hell.

Noo ah dinna want tae pit mysel oop as a student o' diveinity but ah ken verra weel that ther' is a Hell. A guid ane at that. A've been there. A've been there twa times already. A'm nae sae sure

*Encyclopedia Britannica, article on Medical History by Charles Singer.

bit a've been there mair times than that.

Aye! an' some o' you chaps hae been there mair than once, an' some o' ye are headin' right for there th' noo, an' if ye dinna turn roon' an' gang th' ither way, ye'll gang richt doon intil th' hole fer th' rest o' yer life. There's a lot o' chaps wha hae'na got th' guts tae turn roon tae gang th' ither way, an' there's nae much hope for thae kind o' men, fer it's nae a guid place tae get oot o', ance yer there.

It's verra hot weather there, an' it's a lang way doon th' hills, an' th' perspiration is rinnin' a' doon yer face an' neck, lang afore yer doon tae th' main floor, an' mon! when yer warkin' yer way oot o' th' place yer whiskers are singed mony times afore ye get verra far on th' road an' if ye dinna hae a lot o' ambection or determination ye'll nae succeed verra weel, a'm tellin' ye.

Noo there's a Heaven too ye ken. Aye,—Heaven's a bonnie place. Aye,—It's a verra bonnie place. Ma,—Ma Mither's there,—an' yer mither's there. Aye,—an' th' wee bairnie what wis ta'en awa frae ye, wi' diphtheria, she's there too, waitin' at th' gate for ye, wi' white robes an' Angel's wings an' thae bonnie blue e'es an' winsome smile. Aye,—there's a Heaven, too.

But ah canna tell wha's th' matter wi' a meenister wha says there is nae ony hell. Ah ken there's a hell. You ken there's a hell. We a' ken there's a hell. A' he men kens there's a hell, an aw'fu hell. A'm sair fashed about th' meenister. Has he had nae experience wi' th' he-men o' th' countrae? A'm thinkin' he must o' gone clear crazy in th' heid.

Weel, a'm glad there's a Heaven. That's where a' th' Doctors go, aye,—an' maist a' o' th' meenisters an' some o' th' lawyers, but a'm nae sae sure aboot th' politicians. Th' fairmers wull a' go there, too, a' bit th' ane what pits th' wee potatoes doon in th' bottom o' th' bag. Mony o' th' storekeepers wull be there, too, but no th' ane doon in Nebraska wha sold me that wee bag o' stale peanuts for fresh roasted anes. He'll nae get intil Heaven. Not if ah can help it.

A'm sae worriet aboot th' meenister wha says there is'na ony hell. It's an aw'fu place, an ah dinna want ony o' you chaps comin' oop tae Heaven ten years frae th' noo an' tellin' me that ah didna warn ye aboot it.

WEELUM.

COMMON ANOMALIES OF DUODENUM AND COLON: THEIR PRACTICAL SIGNIFICANCE

Statistical data resulting from eight years' combined clinical and roentgen study are presented by John L. Kantor, New York, for the following anomalies: (a) transduodenal bands, (b) redundant colon, (c) high cecum, and (d) low cecum. He states that the chief clinical aspects of transduodenal bands are their occurrence in asthenic women, their association with "duodenal migraine," and their mimicry of duodenal ulcer and gallbladder disease. The chief clinical aspects of redundant colon are its occurrence in all builds and both sexes, its association with marked constipation and, less strikingly, with pain and gas. The chief clinical aspects of high cecum are its occurrence in eupeptic sthenic males, and the ectopic position and increased tendency to inflammation of the appendix. The chief clinical aspects of low cecum are its occurrence in asthenic women and its association with headaches and vomiting, and discomfort in the right lower quadrant. The author offers an explanation for the mechanism of the production of the toxic or reflex symptoms in low cecum and summarizes the general significance of digestive anomalies.—*Journal A. M. A.*

MEDICAL ECONOMICS

THE FALLACY OF GRANTING LIFE DIPLOMAS

J. A. CAMERON, M.D.
PICKFORD, MICHIGAN

There is no one person upon whom society in general is so entirely dependent as upon the physician. He is the sole arbiter in all things pertaining to health and disease. In recent years, the profession is supposed to have shaken off all the supersitition of the ages gone, and to have established itself on a scientific basis. The young man, who today would become a practitioner of Medicine and Surgery, is required to take an extensive course of training, and after that must get some experience through hospital training before being turned out to enter into active work. So much—so good.

Granting that all physicians are sufficiently trained during their student years, and start out in their work well equipped, have we made any provision whereby they shall keep up their work and advance with the times? It was stated recently by a college professor that the practice of medicine had almost entirely changed within five years. Has any provision been made whereby the members of the profession shall be compelled to take up these new methods in the treatment of disease? Nothing, whatever. The young physician today gets his diploma without any strings attached to it. There is no guarantee that he shall ever read another book or ever attend a clinic. He can go out and practice his profession for the remainder of his life and under ordinary circumstances, if he is a good mixer, can hold the respect of his community.

The laity is in no position to question his knowledge of diagnosis and treatment. They cannot tell who is the good doctor from one who is years behind the times. Doctor Charles Mayo said, in a talk given to graduates, recently: "The only one who knows the good doctor is the *good doctor*." A very true statement, indeed. Some of our universities now have chairs of post-graduate medicine and are doing what they can to keep the man who graduated years ago up to date; but the taking of these courses is optional with the doctor and when he is sufficiently fossilized he is loath to get back to school. It is too much of an admission to his people that he is not the walking encyclopedia of medical knowledge he has taught them to believe.

It is the duty of the profession, itself, to see that the public is supplied with physicians sufficiently trained to diagnose and properly treat disease. The people cannot do it. The responsibility rests with physicians, themselves. No physician should be given a life diploma; every physician practicing medicine should be compelled to appear before a Board at least every five years and convince them that his methods are up to date. When such physician requires a course in any specified subject he should be compelled to take such course before his new diploma is given.

We would not think of hiring a teacher in our public schools without inquiring into his standing. Most teachers' diplomas are at first granted for a stipulated time, and, furthermore, arithmetic and most subjects do not change.

The practice of medicine does change. The physician who goes out to the small town, gets himself into the village society, helps the church and clubs and is an all-around good mixer, is a most danger-

ous member of society if he does not, at the same time, keep up to the times in his profession.

The people who look to him in sickness are living in a false security and a mistake in diagnosis or treatment may at any time lead to disastrous results due to his incompetence.

Many physicians practicing today were not taught some of the subjects in the modern curriculum, but there are two ways in which they may acquire a knowledge of new work. They may either take one of the post-graduate courses given at most colleges today, or, when the physician cannot leave his field, he may be trained in this new work by special men sent out for this purpose. With a few office demonstrations in intravenous treatment or the use of the ultra-violet ray, he will be able to add this to his amamentarium and by so doing will not fear the impending appearance before the Board at the end of his five-year term.

In any event, however, something should be done to get our physicians up to the highest degree of efficiency and keep them there.

COMMUNICATIONS

Dear Mr. Editor:

Will you kindly publish the following in the Michigan State Journal?

"Dr. Julius Bauer of Vienna, Austria, will visit the United States during September and October, 1932, to deliver a series of Post-graduate Lectures. Dr. Bauer is the Professor of Medicine in the University of Vienna. He speaks English fluently, and is a man of international reputation. Any Medical Societies that may be interested in this work will kindly get in touch with Dr. P. I. Tussing, 507 West Spring Street, Lima, Ohio, at once."

W. M. McDONALD.

Detroit, January 15, 1932.

January 15, 1932.

My dear Dr. Dempster:

We wish to thank you for doing us the honor of reprinting our description of the A. M. A. Conference of Secretaries and Editors in your Journal, and also for taking the trouble of introducing it with a brief paragraph from your own pen.

We always enjoy reading the Michigan Journal; and if you will turn to page 1542 of the annual index of the New York State Journal of Medicine, you will find that we abstracted twenty articles from your periodical.

Wishing you editorial success and personal happiness.

FRANK OVERTON, M.D.

This very kind note of appreciation is from the executive editor of the *New York State Journal of Medicine*. It has been our good fortune to know Dr. Overton personally for several years and we wish to say in return that we have derived great benefit from the *New York State Journal of Medicine*, which reaches our desk regularly every two weeks. If the JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY has proved in any way satisfactory to the readers it is largely because we have good models of medical journalism before us. Thank you, Dr. Overton.—Editor.

GENERAL NEWS AND ANNOUNCEMENTS

The Detroit Academy of Surgery held its regular monthly meeting at the University of Michigan on Thursday, January 14. The program was provided by the surgical staff of the University of Michigan.

Mr. James B. Charters of Bay City, father of Dr. J. Hamilton Charters of Detroit, died on January 13 of cerebral hemorrhage. Mr. Charters was employed for nearly half a century as engineer on the Michigan Central Railway.

Dr. Angus McLean of Detroit will attend a meeting in Washington relative to World War Veterans' Legislation. Dr. McLean is chairman of a committee in this state which was announced in these columns a few weeks ago to study the situation of World War Veterans so far as it affects hospitalization and service to those unable to carry on.

A "house warming" in connection with the occupation by the Wayne County Medical Society of their new club quarters, 4421 Woodward Avenue, Detroit, was held on January 29 when the members of their Society and their wives and friends turned out in full force to inspect the building which has been tendered them by the David Whitney estate.

Friday, January 15, was the occasion of the opening of the new wing of the Grace Hospital, Detroit, when a large number of the members of the medical profession and their wives responded to an invitation to inspect the new hospital. The reception lasted from 5 P. M. until 9 P. M., during which time a splendid buffet supper was served, the hosts being Superintendent Warren L. Babcock and the Trustees and attending medical staff. The hospital represents, one would say, the last word in efficiency.

The Journal of the Michigan State Medical Society has for a number of years conducted this department of general news. The purpose is to include such items as are considered of general (not local) interest to the profession of the State. The fact that these items are read is justification for their appearance here. The editor does his best to include as many as he can procure but is keenly aware that there are many interesting events that are not recorded. Items are therefore solicited from our readers for this department.

A survey of the standing of medical men in the United States Veterans Bureau relative to their membership in various medical societies presents the following: Out of 1,291 medical men, 32 per cent, or 412, are members of the American Medical Association and of those members only 241 are also fellows of the American Medical Association; 873 of the physicians, or 68 per cent, are not members of their county or state medical societies. Of the 1,291 medical men in the Veterans Bureau only 18 are fellows of the American College of Surgeons, this constituting but 1.3 per cent of the total.

Prospective contributors to medical journals should always ascertain the conditions under which contributed articles are accepted for publication. For example the terms of publication of articles in the JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY will be found stated in the paragraphs in fine print at the head of the first editorial. Some journals, especially those in which the subscription price is above the average, can afford more liberal terms in the way of reprints and illustrations than can other journals which are published at the lowest possible cost to their readers. Under any consideration misunderstanding may be avoided by reading the terms of acceptance of contributions which will always be found on the title page of such publication.

The annual election of delegates from the Wayne County Medical Society to the Michigan State Medical Society resulted as follows:

Delegates: H. W. Plaggemeyer, L. J. Hirschman, F. A. Kelly, H. W. Yates, A. H. Whittaker, W. J. Stapleton, Jr., J. H. Andries, H. A. Luce, G. C. Penberthy, R. M. McKean, C. E. Dutchess, L. O. Geib, E. D. Spalding, A. P. Biddle, J. L. Chester, B. U. Estabrook, C. K. Hasley, W. S. Reveno, J. D. Curtis, D. M. Foster, N. M. Allen, S. P. L'Esperance, S. W. Insley, E. C. Baumgarten, C. S. Kennedy.

Alternates: A. E. Catherwood, L. T. Henderson, C. B. Lakoff, D. I. Sugar, C. J. Barone, D. J. Leithauser, L. J. Garipey, W. P. Woodworth, B. L. Connelly, W. D. Barrett, R. D. McClure, L. B. Ashley, W. L. Hackett, J. C. Kenning, J. R. Rupp, R. B. Kennedy, C. R. Davis, S. G. Meyers, X. A. Jones, W. H. Honor, L. Mae James, Frank Witter, V. L. VanDuzen, E. E. Poos, G. J. Baker.

NORTHERN TRI-STATE MEDICAL SOCIETY

The Council of the Northern Tri-state Medical Society met January 2, at the Commodore Perry Hotel in Toledo, and formulated the following program for the next meeting in Toledo early in April. Clinics for the morning session beginning at 9:00 A. M. will consist of a Psychiatric clinic by Drs. Fordyce and Kaiser of the State Mental Hospital of Ohio; Bone and joint clinic, by Dr. Edward Gillette, of Toledo, Ohio; Dermatologic clinic by Dr. Udo Wile of Ann Arbor; each of these clinics is of one hour duration.

The afternoon session will be devoted to the reading of papers by men of national prominence.

Dr. Udo Wile will present a paper on "The Fluid Status of Syphilitic Therapy"; Dr. Walter Parker of Detroit, a paper on "Pappilodema, or Choked Disc"; Dean Lewis of Baltimore, "Bone Lesions and Their Treatment"; Stanley Rieman of Cincinnati, "Sulphydryl—Further Studies in Cell Division"; Dr. H. B. Lewis, Ann Arbor, "Recent Studies in Blood Chemistry."

The evening program will consist of a dinner followed by an address by a man of outstanding character.

The Council of the Tri-state Medical Society for 1932 consists of:

Dr. H. D. Camp, Ann Arbor, president; Dr. E. D. Pedlow, Lima, Ohio, secretary; Dr. H. B. Larson, Laporte, Ind., treasurer; Dr. Senseney, Fort Wayne, Ind., vice president; Counsellors, Dr. Norris Gillette, Toledo, Ohio; Dr. H. D. Randall, Flint, Mich.; Dr. Hoffman, Fort Wayne, Ind., and Dr. W. M. Donald, Detroit, Mich.

OBITUARY

DR. C. D. CHAPPELL

Dr. Carl D. Chappell of Flint died on January 11 at Philadelphia after an illness of several months. He was born at Mt. Morris in 1878. He received his medical training at the Michigan College of Medicine and Surgery. For the past few years he confined his attention to roentgenology, having at one time charge of the X-ray department of the Hurley Hospital, Flint. Dr. Chappell was at one time president of the Genesee County Medical Society. He is survived by his wife and one son, William, and a daughter, both of whom live at home.

RADIATION THERAPY IN CANCER OF MOUTH: USE OF PURE GAMMA RAYS

G. E. PFAHLER and J. H. VASTINE, Philadelphia, describe the technic of pure gamma irradiation, which they have used in the treatment of 111 patients with intra-oral cancer. Of these, thirty-nine have become symptom-free and are at present apparently well after a period of from one to five years; and nineteen are still under treatment and expected to recover. Treatment was interrupted in four patients; five patients cannot be traced, and forty-four are dead. The authors believe that 50 per cent of the patients with cancer of the mouth should recover if treated at once, thoroughly and skilfully by this method as soon as they come under the care of a physician, and 75 per cent should recover when patients can be taught to apply for treatment earlier. The advantages of pure gamma radiation treatment are as follows: It is painless at the time of application, though it causes soreness and swelling in the mouth at the height of the radiation effect. It does not require an anesthetic. It does not require hospitalization. It does not produce mutilation. It usually does not produce constitutional symptoms. The skin effects, when carefully managed as directed, are of no consequence. In tongue cases, the function of the tongue is preserved. It usually causes the disappearance of metastatic lymph nodes. When these are sluggish, radium needles are sometimes inserted into the lymph node. If the glands break down they are removed surgically. The disadvantages of pure gamma radiation treatment are as follows: It is exceedingly expensive, because one is only using a small portion of the total radiation. It is not very practical to hire radium because one must pay while it is in transit. A considerable quantity of radium must be available if one is treating a number of patients, and any one who treats only a few patients generally lacks experience. It interferes with the occupation of the patient during a period of at least a month. It requires the constant or daily supervision of the experienced radiologist and cannot be turned over to technicians. It requires the constant coöperation of the patient, which may be difficult to obtain. The prolonged treatment that is necessary may be interrupted by ignorant patients who do not appreciate the seriousness of the disease or who consider themselves well prematurely. The greatest possible precautions against undue personal exposure must be taken by the radiologist and the technician because of the large amounts of radium that must be used.—Journal A. M. A.

MICHIGAN
STATE
MEDICAL
SOCIETY
ITS
EXPANDING
ACTIVITIES
IN BEHALF
OF THE
MEMBERS
AND
PUBLIC

- 1913 {
1. Scientific County Meetings
 2. Annual Meeting
 3. The Journal
 4. Legal Defense

- 1918 {
1. Annual Meeting
 2. Legal Defense
 3. Enlarged Journal
 4. Tuberculosis Society
 5. Military Committee
 6. Clinical Terms
 7. Aid to County Societies
 8. Active Committees on Civic Relations Tuberculosis Public Health Venereal

- 1923 {
1. Annual Meeting
 2. Enlarged Journal
 3. Legal Defense
 4. Survey of the U of M. Hospital
 5. A. M. A. Membership
 6. Public Lectures
 7. Aid to County Programs
 8. Active Committees Civic Relations Health Tuberculosis
 9. District Conferences
 10. Post Graduate Clinics
 11. Joint Committee
 12. Legislation

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| <ol style="list-style-type: none"> 1. Annual Meeting 2. Enlarged Journal 3. Legal Defense 4. Survey of the U. of M. Hospital 5. A. M. A. Membership 6. Public Lectures 7. Aid to County Programs 8. Active Committees
Civic Relations
Health
Tuberculosis 9. District Conferences 10. Post Graduate Clinics 11. Joint Committee 12. Legislation 13. High School Lectures 14. Insurance Fees 15. Special Representation in New Proposals | <div style="display: flex; align-items: center;"> <div style="margin-right: 5px;">1931</div> <div style="margin-right: 5px;">1932</div> <div style="font-size: 2em;">}</div> </div> | <ol style="list-style-type: none"> 1. Annual Meeting 2. Legal Defense 3. Larger Journal 4. District Clinical Conferences 5. Post Graduate Courses 6. Joint Committee 7. Civic Relations Committee 8. Legislation 9. History 10. Survey of Medical Agencies 11. Radio Talks 12. County Health Units 13. Endowment Foundation 14. Kellogg Fund 15. Children's Fund 16. Crippled Children's Commission 17. Cancer Committee 18. Community Health Problems 19. Liaison with Special Organizations 20. Joint Activity with Postgraduate Dept. of University of Michigan 21. Information and Aid Bureau 22. Public Press 23. Industrial Relations 24. Poliomyelitis Commission |
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Your State Society is your Representative in these Contacts and Activities. It conserves your interests and enhances your welfare. It relieves you of annoying details and conserves your time in these and many other ways. These **ANNUAL BENEFITS** are yours for less than three cents a day Membership Dues.

No Licensed Reputable Physician Is Justified in Not Holding Membership.

Support your Organization and bring in your Neighbor who is not a Member.

SOCIETY ACTIVITY

JOINT COMMITTEE MEETING

The Joint Committee will convene at the Michigan Union in Ann Arbor on February 4, 1932, at 12:00 noon Eastern Standard Time.

A. V. WENGER, TREASURER

At the January Council meeting Dr. John R. Rogers resigned as treasurer of our Society and Dr. Aaron Verne Wenger of Grand Rapids was elected as his successor. Dr. Rogers' services were suitably recognized by a resolution of appreciation adopted by the Council.

Dr. Wenger is well known and popular with the profession not only of his home city, but also of the state. He has been in practice for thirty-one years. He is an ex-president of his county society and has represented it for many years in the House of Delegates.

As custodian of the Society's financial reserves, "Verne," as he is companionably known, will be a diligent "watch dog" of our treasury.

REDUCTION OF DUES

It was but natural in these times, when corners are being cut, that requests for reduction in dues should be forthcoming. There may be reasons for the request being granted. There are also opposing reasons. Some of these have been set forth in the Secretary's annual report.

Our dues are not taxes; they are privilege fees for which a member receives definite benefits and privileges. His dividends are handsome returns upon this relatively small monetary sum. Few members appreciate this. In order that they might better visualize the outstanding benefits, a series of charts was printed in the January Journal.

Our dues are fixed by our by-laws. Only the House of Delegates has power to amend the by-laws. The council has the power to appropriate money from the funds of which it is custodian.

Sympathetic with the requests, desirous of stretching a point and wishing to render assistance, the Council, at its January meeting, cut expenses to the fullest limit and re-

duced salaries. By resolution it instructed the Secretary to rebate \$2.50 of each member's dues and to charge the rebate to the contingent funds of the Society. Notice of this action was promptly mailed to each county secretary.

This action provides that your 1932 dues will be \$7.50 *provided they are paid by April 1*. In order to participate in this emergency benefit remit your current dues to your County Secretary today.

POST-GRADUATE CONFERENCES

Members are urged to watch for the announcement that will appear in the March Journal imparting the schedules of the Post-Graduate clinics that will be conducted by the Society and the Department of Post-Graduate Medicine of the University of Michigan during the early summer months.

A splendid program of clinical instruction is being prepared. These clinics and these instruction courses will afford our members an unsurpassed opportunity to pursue work in special fields of medicine.

Should any member be desirous of receiving advance information, in order that he may plan his absence from practice, he may obtain this information by writing direct to the Director of the Department of Post-Graduate Medicine, University of Michigan, University Hospital, Ann Arbor, Michigan.

PATERNALISM

WALTER F. DONALDSON, M.D., Secretary
Medical Society of Pennsylvania,
PITTSBURGH, PENNSYLVANIA

Lest we be justly accused of rendering inept judgment on an expert subject, we shall limit our comments on paternalism to its influence upon medical practice and the health of the people.

It has been said that investigation offers the most fertile field for paternalism, and that paternalism gives advice but does not take it. That these statements are true may easily be established in the enormous mass of statistics constantly available on disease and injury, and the reams of generalized sickness advice at the disposal of the paid investigator and the subsidized propagandist. We physicians are frankly critical of those who advocate a paternalistic control of the entire field of the practice of medi-

cine, but can be charitable toward their exuberance, since we believe they fail to observe that our modern social machinery is so very complicated that what we may do at one point is sure to have unforeseen consequences that may do great damage at other points.

Sociologists and socialists, advocating the application of wholesale methods to that which remains fundamentally an individual problem, fail to realize that while health is a public interest, its promotion may be best achieved by the trained physician in public or private practice. While the relief of sickness is the outstanding concern of humanity, generalization in attempts at sickness relief may prove dangerous.

Under our Federal Government at present there are six bureaus in four departments that deal intimately with health, and both Congress and the President have to date been unable to eliminate consequent overlapping and ill-advised duplication of functions. Consider child health as the concern of four separate Federal bureaus, and every bureau as a nest of job holders, and you may at a glance recognize the reason for failure to abolish or consolidate superfluous bureaus.

Admitting that Government should maintain quarantine regulations, we protest against its entering the practice of obstetrics and pediatrics. Urging that Government should make every provision for the rehabilitation, the comfort, and the security of our war veterans who suffer as the result of their war service, we writhe under the paternalism that provides free hospitalization and treatment to veterans for present-day needs in no way related to their war service and without consideration of their ability to pay local physicians and hospitals.

In spite of established paternalistic forms of medical practice, we believe that certain forms of private group medical practice will justify their continuance, and that many physicians will continue in private practice, rendering the type of medical service peculiar to the progressive physician who always brings his best endeavors to bear upon "his patient," be the latter rich or poor. Our protest is against the entrance of government-supported forms of practice into competition with our local hospitals, local groups and private practitioners. The spectacle of private physicians contributing through their

income tax payments to the upkeep of government-supported physicians, who treat free of charge the civil life ailments of the prosperous neighbors of the private physician, should be abhorrent to all.

Might not our organized medical profession assume at this time national leadership in restoring the traditional American policy that the people support the Government, not the Government the people, by converting the American Legion and Congress to abandonment of the policy of erecting, equipping, "staffing" and maintaining additional veterans' hospitals. Adoption of the current plan of the American Medical Association for the use of existing local facilities for home or hospital treatment of the more acute ailments of many veterans, at a saving of hundreds of millions of dollars to taxpayers, might awaken our people to the growing menace of paternalism.

Since physicians represent that first group of citizens whose economic welfare is seriously threatened by this form of paternalism, and since they compose one of the few remaining individualistic professions, it is the duty of physicians to become politically conscious. Every state and county medical society should be active this winter in the campaign to eliminate unfair Federal competition with private medical and hospital practice.

Paternalists and bureaucrats give no thought to the pauperization and the weakening of public morale engendered by bestowing the right to free medical service upon those who are not eligible for charity.

THE MUSKEGON PLAN

THIS AGREEMENT, made as of the.....day of December, A. D. 1931, by and between the County of Muskegon, Michigan, as party of the first part, Medical Participating Association, as party of the second part, Hackley Hospital, a Michigan Corporation, as party of the third part, and Mercy Hospital of Muskegon, Michigan, a Michigan Corporation, as party of the fourth part;

Witnesseth as follows:

WHEREAS, the County of Muskegon has been sending to the University Hospital at Ann Arbor, Michigan, for medical, surgical and hospital care persons who are deformed who need operative attention, pregnant women and persons who are ill, none of such persons having funds of their own to secure such treatment and care, and

WHEREAS, the County of Muskegon has been paying large sums of money for the various items that go with the care of persons so afflicted, and for such other items as transporting the patients to and from Ann Arbor, Michigan, and

WHEREAS, certain members of the Muskegon County Medical Society did present to the Board of

Supervisors of Muskegon County, at its October, 1931, session, a plan that they in co-operation with the two hospitals in the city of Muskegon, Michigan, would take over the care and treatment of such indigent persons as have been heretofore sent to Ann Arbor for treatment, and

WHEREAS, the said Board of Supervisors did appoint a committee to study said proposal, to investigate the matter, and if satisfied that the plan would be beneficial to the people of Muskegon County, that said committee had power to act, to accept said proposal so made and that the County would enter into contract for a term of one year with the parties to the proposal, now, therefore

It is agreed as follows by and between the parties hereto, as their respective contractual obligations are herein enumerated and each of the parties hereto agrees to and with each other that they will comply with all of the obligations herein set forth as applying to each particular party.

COUNTY OF MUSKEGON

The County of Muskegon, otherwise designated herein as party of the first part, agrees that for and in consideration of the performance by the other parties hereto of the obligations undertaken by them herein, that it will pay to the Medical Participating Association, the sum of \$10,000.00 for the care and treatment of 200 indigent persons admitted to Hackley and Mercy Hospitals of Muskegon, Michigan, in the aggregate, by order of the Probate Court of Muskegon County, and should less than 200 persons be so admitted to said hospitals in the aggregate, that then it will pay a sum of money equal to the quotient obtained by dividing the figures 200 into the figures \$10,000.00 and then multiplying such quotient by the number of patients admitted to the hospitals of the parties of the third and fourth part hereto, and should more than 200 patients be admitted to said hospitals by the Probate Court for Muskegon County, then said first party shall pay such sum in addition to the sum of \$10,000.00 as is represented by dividing the figures 200 into the figures \$10,000.00 and multiplying the quotient by the number of patients so admitted to said hospitals. The said sums of money shall be payable and payment shall be made by the proper disbursing officers of Muskegon County, Michigan, as follows: on April 1, 1932, upon presentation to the proper disbursing officers of Muskegon County of a statement showing the number of patients admitted to said hospitals by the Probate Court as indigent persons, such proportion of \$10,000.00 as the number of patients so admitted during said first quarter of 1932 shall bear to the figures 200 and \$10,000.00, in the manner of computation herein set forth, and in like manner on July 1, 1932, payment shall be made for all persons admitted during the second quarter of 1932 and in like manner on October 1, 1932, payment shall be made for patients admitted during the third quarter of 1932 and on January 1, 1933, payment shall be made for all patients admitted during the fourth quarter of 1932, which said several sums of money when received by the said party of the second part hereto shall be in full payment for all services performed by said party of the second part to this agreement for the year 1932.

The said party of the first part further agrees that it will pay to each of the parties of the third and fourth part hereto, respectively, the sum of \$4.50 per day for each patient admitted to such hospital for such time as they are confined therein under directions from the party of the second part hereto. It is understood that this said sum of \$4.50 per day shall include all regular hospital care and attention or any treatment ordered by the said second party hereto except it shall not include the services of

special nurses, the furnishing of shoes, braces, crutches or glasses or the furnishing of serums or ambulance charges.

The said party of the first part hereto agrees to pay to the said parties of the third and fourth part hereto their statements of account for all patients admitted to said hospital during any month, on the first day of the month next succeeding the admittance of said patient to the hospital, which payment shall include all services rendered by the parties of the third and fourth part hereto to patients during the period the statement of account covers, and the proper disbursing officers of the said party of the first part shall pay said statements at the time herein fixed upon presentation to them of itemized statement of charges and accounts.

The said party of the first part hereby consents to the admittance to the said hospitals of all patients who can be successfully treated and cared for in the Muskegon Hospitals by the Muskegon physicians and surgeons under this agreement.

MEDICAL PARTICIPATING ASSOCIATION

The Medical Participating Association, the second party to this agreement, is an Association made up of various members of the Muskegon County Medical Society who have agreed to enter into this contract with the parties of the first, third and fourth part.

The said party of the second part further agrees that for and in consideration of the several sums of money to be paid by the party of the first part hereto, that said Association through its members will furnish all necessary medical and surgical care, skill and treatment to the persons admitted to the hospitals of the parties of the third and fourth part hereto.

The party of the second part further agrees that they will appoint a Director and an Assistant Director who shall see all patients admitted to the Muskegon Hospitals and assign said patients to such physician or surgeon as his or her case may require. The party of the second part further agrees that the said Director will keep a record of all patients so admitted to the Muskegon Hospitals by the Probate Court of Muskegon County. The said party of the second part further agrees that the Director will watch the progress of the treatment of cases in the hospitals, with the object of securing additional treatment if necessary, and with a further object of not keeping patients in the hospitals longer than their condition warrants.

The said party of the second part further agrees that its members will not order any extra service or medicine not covered by the day rate with the hospitals without first obtaining the written consent of the Director or the Assistant Director of the Association.

The said party of the second part further agrees that when a patient leaves the hospital and is in need of further care then the member thereof having the patient in charge in the hospital will attend said patient in the out-patient department of the hospital in which said patient was confined, and in case of surgical patients who are not able to come to the out-patient department, that then the member having such case will visit the home of the patient to give care and treatment until such patient is able to come to the out-patient department of the hospital in which such patient was confined without additional charge.

The party of the second part further agrees that the members thereof will devote their best efforts and skill to alleviate the ills, sufferings and medical or surgical needs of the patients they are treating and that they will make every effort within their ability to handle cases assigned to them, and will not refer cases back to the Probate Court of Muske-

gon County for assignment elsewhere unless the same be necessary for the better care and treatment of the patient.

THE MUSKEGON HOSPITALS

Hackley Hospital of Muskegon, Michigan, and Mercy Hospital of Muskegon, Michigan, the parties of the third and fourth part hereto, hereby agree to and with the parties of the first and second part and particularly with the party of the first part that they will receive and take in all of the patients sent to them by the Probate Court for Muskegon County, provided, however, that no patient will be received until such patient has been examined by some physician practicing in Muskegon County so that no person with a contagious disease would be offered for admission to said hospital. The parties of the third and fourth part for and in consideration of the sending of the patients in the classes provided for herein do agree that they will make a flat charge of \$4.50 per day for the care and treatment of such patients for each day that said patient is confined to said hospital, and further the said sum of \$4.50 per day is to include board, room, radium and all routine charges made or incurred in the care and treatment of the patient except that it does not include the services of special nurses, the furnishing of shoes, braces, crutches, glasses, serums or ambulance charges, which said items herein excepted are declared to be extras and are to be paid by the said party of the first part when statements of account are presented as hereinbefore and hereafter set forth. The parties of the third and fourth part further agree that if in the judgment of the Director selected by the said party of the second part that a patient will make better progress in a private room, that then they will place said patient in a private room.

The said parties of the third and fourth part further agree that they will open and maintain an out-patient department for the care and treatment of patients who have been cared for in the hospital and who no longer need hospital care and that such patients may come to said out-patient department for dressings and other needed medical care which is supplemental to the treatment given said patient in the hospital and necessary to bring about recovery, and for such service the said parties of the third and fourth part agree to make a flat charge of \$0.50 per day per patient, to be paid by said first party.

The said parties of the third and fourth part further agree that on the first day of any month they will present to the disbursing officers of the said party of the first part an itemized statement of all services rendered under this contract to patients during the preceding month, which statement shall include the day rate and any extras charged against any particular case, and further agree to furnish such additional information as the party of the first part may require for the auditing of said statements of account.

All of the parties hereto agree that this contract shall remain in full force and effect for the term of one year from and after the first day of January, 1932.

The party of the first part has caused the presents to be signed by its proper contracting officials, by authority of a resolution of its Board of Supervisors, to-wit, the Chairman of said Board of Supervisors and the Clerk of the County of Muskegon; the said second party has caused these presents to be signed by the Chairman and Secretary of its Board of Trustees who have been given authority so to do by appropriate Association action; the party of the third part has caused these presents to be signed by the President of its Board of Trustees and also the Secretary thereof and has affixed hereto

its corporate seal; and the party of the fourth part has caused these presents to be signed by its President and its Secretary and has affixed hereto its corporate seal, and the execution of this contract by the parties of the third and fourth part has been approved by their Board of Directors, all on the day and year first above written.

COUNTY OF MUSKEGON

By.....
Chairman of Board of Supervisors

ATTEST:

.....
Clerk, Board of Supervisors

MEDICAL PARTICIPATING ASSOCIATION

By.....
Chairman of Board of Trustees

ATTEST:

.....
Its Secretary

HACKLEY HOSPITAL

By.....
President, Board of Trustees

ATTEST:

.....
Its Secretary

MERCY HOSPITAL OF MUSKEGON, MICHIGAN

By.....
President

ATTEST:

.....
Its Secretary

MINUTES OF THE SPECIAL MEETING ON
SURVEY OF MEDICAL HEALTH
AGENCIES IN MICHIGAN

The committee met in the Statler Hotel at six o'clock on January 7, 1932, and was called to order by the Chairman, Dr. W. H. Marshall. The following committee members were present:

- W. H. Marshall, Chairman
- F. A. Baker
- L. G. Christian
- B. U. Estabrook
- C. S. Gorsline
- F. C. Warnshuis

1. The minutes of the last meeting of the committee were read and approved.

2. The committee then resolved itself in informal discussion of the draft of the report to be made to the House of Delegates. The portions assigned and the special subjects delegated to committee members were presented by the individual members and were accorded the consideration and discussion of all the committee members.

3. Upon motion of Baker-Estabrook, the outlined sections of the report as discussed were approved.

4. Upon motion of Gorsline-Christian, the members of the committee agreed to send their sections to the Secretary for compilation into a general report.

5. Upon motion of Christian-Estabrook, the compiled report is to be mailed to each member as soon as possible and at the special meeting of the House of Delegates a member would read that portion of the report which had been assigned to him with the introduction and the summary to be presented by the Chairman of the committee.

6. After considerable discussion of certain factors involved in the survey the committee adjourned at 9:30 P. M.

F. C. WARNSHUIS,
Secretary.

MINUTES OF THE MID-WINTER SESSION OF THE COUNCIL OF THE MICHIGAN STATE MEDICAL SOCIETY

The Council of the Michigan State Medical Society met in regular mid-winter session at the Hotel Statler in Detroit at 10:00 A. M. on January 8, 1932. The Council was called to order by the Chairman, Dr. Corbus, with the following councillors present:

B. R. Corbus, Chairman, Henry Cook, George C. Hafford, C. E. Boys, T. F. Heavenrich, Julius Powers, Harlen MacMullen, Paul R. Urmston, George L. LeFevre, Richard Burke, B. H. VanLeuven, J. D. Bruce, C. A. Neafie, A. S. Brunk, Henry R. Carstens.

Carl F. Moll, President; J. H. Dempster, Editor; W. J. Stapleton, Jr., Chairman Medical-legal Committee; F. C. Warnshuis, Secretary.

1. The Secretary presented his annual report as follows:

SECRETARY'S 1931 ANNUAL BUDGET

To the Council
Michigan State Medical Society
Gentlemen:

Mindful of the trust involved I respectfully submit to you and through you to the members my annual report for 1931.

FINANCIAL

Appended hereto is the Auditor's financial report supplemented by my itemization of the receipts and expenditures of funds.

FINANCIAL COMMENT

It is with considerable pride that this financial statement is submitted because of the showing it imparts. The following comments are pertinent:

- A. Our net loss is \$1,911.16.
- B. Our advertising income exceeded our estimate by \$331.38.
- C. Our income from dues was \$1,157.75 less than 1930 with 335 delinquent members.
- D. Our Investment depreciation is but \$11,544.70.
- E. Our Journal cost is \$525.26 less than 1930.
- F. We incurred emergency expenses of \$1,000 to the Infantile Commission; \$371.00 for new lanterns and \$666.87 for viewing boxes, a total of \$2,037.87 for additional expenses.
- G. Council, Society, American Medical Association Delegates and Post Graduate Conferences expenses were increased.
- H. Dues, subscriptions, advertising incomes were less than in 1930.

After a careful review, computation and consideration of involved conditions the budget for 1932 represents a sound estimate. Based on experiences gained in past years it is my opinion that the following budget reflects a dependable financial estimate to govern 1932 finances.

BUDGET 1932

<i>Income</i>	
3,100 members' dues at \$10.00.....	\$31,000.00
Interest on investments.....	1,500.00
	\$32,500.00

Expenditures

Defense Account—3,100 at \$1.00.....	\$ 3,100.00
Journal Subscriptions, 3,100 at \$2.50.....	7,750.00
Rent, light, telephone, power.....	1,800.00
Annual Meeting.....	1,000.00
Post Graduate Conferences.....	2,000.00
Committee Expenses.....	1,500.00
Council Expenses.....	1,500.00
Printing and Postage.....	400.00
Joint Committee.....	250.00
Delegates to American Medical Association.....	500.00
Stenographic Services.....	3,000.00
Secretary.....	6,500.00
Contingent Fund.....	3,200.00
	\$32,500.00

This is estimated on the assumption that dues will be received from 3,100 members and that the Society will carry by notes some 500 members for one year.

JOURNAL BUDGET

<i>Income</i>	
Subscriptions.....	\$ 7,750.00
Advertising.....	8,000.00
	\$15,750.00
<i>Expense</i>	
Printing and Mailing.....	\$10,000.00
Editor's Salary.....	3,500.00
Editor's Expense.....	900.00
Contingent.....	1,350.00
	\$15,750.00

NOTE: Last year I estimated advertising revenue of \$8,500.00—our revenue was \$8,849.23. An estimate of \$8,000.00 for 1932 is conservative. Our Journal Cost was estimated at \$11,500 and was \$10,187.52. In estimating \$10,000.00 for 1932, I have not taken in consideration a printing saving of some \$500 to \$600 that will accrue from reduced contract price.

Considering these factors, it may well be concluded that the past year has witnessed the Society's financial stability satisfactorily maintained and its every activity sustained in fullest degree.

Dr. John R. Rogers, Treasurer, has advised your Secretary of his desire to be relieved from the duties of that office. Dr. Rogers has, for years, been most diligent, always accommodating and courteous and ever willing to contribute time from his busy practice to faithfully perform his official duties. Your Secretary appreciatively acknowledges Dr. Rogers' helpful assistance and recommends that the Council recognize his service in a suitable manner.

DEFERRED PAYMENT OF DUES

Complying with the action of the House of Delegates and the Council, a new account of Notes Receivable will be opened. Blank notes have been supplied to County Secretaries.

THE JOURNAL

The business affairs of the Journal are in a satisfactory condition. An advertising income of \$8,849.23 for the year exceeded our expectations when so many business firms have been curtailing advertising expenditures. One is, however, unable to foretell what our experiences will be this coming year. Our contacts cause us to believe that if present financial conditions continue we will encounter at least a 33⅓ per cent decrease in advertising income. The cancellation of several contracts during the past sixty days is indicative of added curtailment on the part of advertisers.

An increased advertising income of at least \$5,000 is obtainable if the Council and all our members would but subscribe coöperative support by patronizing our Journal advertisers. Firms advertise for the purpose of securing business, as well as

to impart information pertaining to their products. They do not purchase space solely to make a contribution to our publication. Many of the advertisements contain coupons and others contain offers of samples and literature. Contracts are continued when business returns are received. When such returns are not received, contracts are cancelled. If our members would peruse the advertising pages of each issue and spend a few cents for postage, each month, to reply to advertisers, satisfactory proof of the advertising medium value of the Journal would be established and enlarged revenue would accrue. While not urging a boycott, it is recommended that, other things being equal, members limit their business to our advertisers. There are several Michigan firms who are valued patrons of the Journal. Give them preference in placing orders. Tell the salesman who calls on you that you are placing your business with Journal advertisers. If this cooperation and response is exhibited, our advertising income will be maintained and increased.

Our business relationships with the Bruce Publishing Company have been exceedingly pleasant and satisfactory. Their typographical work is beyond criticism. The fullest degree of cooperation is constantly evidenced. Expressive of their interest and integrity, the President voluntarily advised your Secretary that the printing cost would be reduced thirty-five cents a page during 1932 and if further cost reductions were attainable a still greater reimbursement would be made. This gratifying proposal will produce a printing expense reduction for the year of from \$500 to \$600.

An added Journal cost has been encountered in the increased number of changes in addresses involving the making of new addressograph plates.

No charge has been made against the Journal account for correspondence and postage expense incurred in the Secretary's office in discharging the work entailed in the business management of the Journal.

SOCIETY MEMBERSHIP

On January 1, 1930, our total membership was 3,426. On December 31, 1931, our total paid membership was 3,235, with 335 delinquent members, a loss of 191 members.

Our County Society affiliations are as follows:

County	1930	1931	Loss	Gain	Un- paid	Deaths
Alpena	16	14	2	..	1	1
Antrim-Charlevoix	..	..	..	..	..	..
Emmet-Cheboygan	23	23	..	..	..	2
Barry	12	12	..	..	..	..
Bay	62	63	..	1	2	..
Berrien	44	42	2	..	8	1
Branch	11	12	..	1	1	..
Calhoun	117	112	5	..	2	2
Cass	10	11	..	1	..	..
Chippewa-Mackinac	15	15	..	..	1	1
Clinton	15	13	2	..	2	..
Delta	20	21	..	1	2	1
Dickinson-Iron	18	18	..	..	3	..
Eaton	20	16	4	..	2	..
Genesee	134	139	..	5	6	2
Gogehic	25	25	..	..	2	..
G. Traverse-Leelanau	27	25	2	..	2	..
Gratiot-Isabella-Clare	27	26	1	..	..	1
Hillsdale	20	22	..	2	..	1
Houghton	39	42	..	3	..	1
Huron	9	9	..	..	..	..
Ingham	98	94	4	..	1	5
Ionia-Montcalm	39	36	3	..	1	1
Jackson	77	76	1	..	5	..
Kalamazoo	111	120	..	9	..	3
Kent	201	200	1	..	18	1
Lapeer	19	24	..	5	1	..
Lenawee	34	33	1	..	3	1
Livingston	12	10	2	..	1	..
Luce	9	9	..	..	..	..
Macomb	39	34	5	..	6	1
Manistee	13	14	..	1	..	..
Marquette-Alger	34	33	1	..	2	2
Mason	11	10	1	..	2	..
Mecosta	19	20	..	1	2	..
Menominee	12	12	..	..	..	2

Midland	8	9	..	1	1	..
Monroe	35	33	2	..	2	..
Muskegon	68	68	..	..	..	2
Newaygo	10	10	..	..	..	..
Oceana	8	7	1	..	..	..
Oakland	104	93	11	..	22	..
Osceola-Montmorency	..	..	..	..	..	..
Crawford-Oscola-	11	11	..	..	..	..
Roscommon-Ogemaw	..	..	..	..	..	..
Ontonagon	7	6	1	..	..	1
Ottawa	26	28	..	2	..	1
Saginaw	72	70	2	..	4	..
Sanilac	6	6	..	..	..	1
Schoolcraft	5	4	1	..	..	..
Shiawassee	39	30	9	..	1	..
St. Clair	44	46	..	2	3	3
St. Joseph	17	15	2	..	2	..
Tri	18	20	..	2	..	1
Tuscola	25	26	..	1	1	1
Washtenaw	111	119	..	8	6	2
Wayne	1,420	1,249	171	..	219	7
	3,426	3,235	237	46	335	50
	3,235	..	46	..	..	..
	191	..	191	..	..	..

DEATHS

The following deaths for 1931 are reported:

County	Name
Alpena	Samuel T. Bell
Northern Michigan	A. J. McKillop
	John Reycraft
	D. A. Van Noppen Zwigtman
Berrien	E. L. Parmeter
Calhoun	Henry A. Shurtleff
	J. J. Griffin
Chippewa-Mackinac	W. A. Lemire
Delta	C. B. Burr
Genesee	Harry W. Knapp
	Michael F. Brondstetter
Gratiot-Isabella-Clare	W. H. Sawyer
Hillsdale	Wm. H. Dodge
Houghton	Chauncey L. Barber
Ingham	R. Benner
	Ernest L. Martin
	F. N. Turner
	L. N. Yerkes
Ionia-Montcalm	Wm. H. Lester
Kalamazoo	F. B. Crowell
	A. L. Van Horn
	Francis J. Welsh
Kent	Frank C. Kinsey
Lenawee	H. L. Older
Macomb	Michael C. Cronin
Marquette-Alger	John H. Andrus
	Alfred Hornbogen
Mecosta	C. W. Bunce
	M. L. Teeple
Menominee	Calvin R. Elwood
	David R. Landsborough
Muskegon	J. Bursma
	A. G. Burwell
Ontonagon	Wm. B. Hanna
Ottawa	C. J. Abbott
Sanilac	G. S. Tweedie
St. Clair	C. C. Clancy
	W. H. Morris
	C. B. Stockwell
Tri	O. L. Ricker
Tuscola	C. W. Clark
Washtenaw	E. B. Kellogg
	Aldren Warthin
Wayne	Fred W. Baeslack
	H. A. Hagerty
	J. H. Hathaway
	Herbert J. Higgs
	John A. Miller
	Frank B. Tibbals
	Arthur Van Der Velpen

In tribute, your Secretary repeats what he was privileged to state at our Annual Meeting: Some went in the fullness of years. Others passed on in the midst of the promises of youth or middle life. They have been called to the Great Adventure which quickens us to make ready for that supreme event of human experience. Their responsibilities are now ours. May our deeds erect an enduring monument in their memory.

COUNTY SECRETARIES CONFERENCE

Existing conditions caused your Secretary to recommend to the Executive Committee that the Annual Conference of County Secretaries be post-

poned for one year. It was further recommended that sometime during February or March, Councilors arrange at a convenient place for personal conference with the Secretaries of their respective districts. Such district meetings will accord the Councilor an opportunity to discuss local conditions and problems. Each Councilor will be in a better position to make constructive and helpful recommendations to your body and to your officers. This recommendation was concurred in by the Executive Committee. Councilors may confidently look to this office for every possible assistance in their district problems and for service to their district members.

COMMITTEES

It is extremely inspiring to note and record the zeal and achievements of the several committees of the Society. These members are giving of their time, their thought and labor in discharging committee work. It is impossible to accord them sufficient praise and appreciation. Definite accomplishments are being attained—all of which is to the individual member's benefit and profit.

Committee reports and progress are imparted through the Journal. It is not necessary to enlarge upon their work at this time. Your Secretary does, however, urge County units and individual members to remain conversant with what our committees are achieving and to conform to their recommendations.

MEMBERSHIP BENEFITS

To enable our members to visualize and more fully realize and appreciate the benefits of membership and the varied activities that characterize our Society activities, your Secretary prepared five tables which were published in the January Journal.

We meet, from time to time, a member here and there who has none or but very little conception as to what his society is accomplishing. These members are, at times, inclined to deprecate their affiliation. It is hoped that these charts will convey convincingly that society affiliation is a doctor's greatest asset next to his license to practice.

SCIENTIFIC PROGRAMS

Our Post-Graduate and District Conference programs meet a definite need. We have, for several years, devoted a large amount of energy and funds developing this service to our members. These programs must, of course, be continued. However, it has been apparent for some time that providing assistance to County Societies in presenting scientific programs is an obligation that should now be assumed. We have about twenty-five county societies whose memberships range from ten to thirty. It is difficult for them to arrange a sustained scientific program. They merit assistance. The State Society can tender assistance in two ways: first, by sending speakers and, second, by gradually building up a film library and send out these teaching films. An investment of \$500 this year would be the means of initiating this program, and from my contacts I am sure County units will be grateful for this movement that will stimulate renewed interest in county meetings.

GENERAL ACTIVITIES

In the Council's Annual Report to the House of Delegates and in my reports, published from month to month in the Journal, I have imparted the details of all our activities during the year. Their repetition is eliminated at this time. It is believed that these monthly reports produce a greater realization of the Society's scope of work and the work that is being done in behalf of every member. With your approval this policy will be continued.

DUES

Forced, as most of us have been, to curtail our expenses it was but natural that the question of reduction of dues should be raised. Such suggestions are lacking in substantiating reasons, if one but pause to make a critical analysis.

Our dues are Ten Dollars per year. Several states have dues of from Fifteen to Twenty-five dollars per year. Our dues of ten dollars per year amounts to about three cents a day—the price of a daily paper. A suggested reduction to \$7.50 per year would give but a \$2.50 saving a year, or not quite three-quarters of a cent per day. This saving of \$2.50 a year or $\frac{3}{4}$ cent per day will not enable one to obtain relief in office expense or allay hunger.

On the other hand, such a reduction would create a lessened society income of some \$8,500 compelling total abandonment of some of our important activities.

In these times, more than at any other time, there is need for our Society to be intensely alert to a member's interest and to protect his future. In place of curtailment our work should be expanded and our efforts increased. To hobble such activities by financial restrictions is unsound and unwise at this time.

There are economies that are wise and indicated. The reverse would be true should a reduction of dues be accomplished. Our annual dues are fixed by the By-Laws. The House of Delegates is the only body that can amend these By-Laws.

Your Secretary is not entering into an argumentative discussion. I seek only to present guiding facts. The cry of reduction of taxes heard in governmental and legislative halls is quite pertinent at the present time and tax reform may well be initiated. But our dues are not taxes and should not be looked upon as such.

In reality, our dues are privilege fees from which each member derives privileges and benefits in degree and value far in excess of the monetary amount involved. If these benefits are to continue and be increased and enhanced as our history continuously records there can be no reduction, for to do so would be to place an obstructing barrier that would arrest progress.

ANNUAL MEETING

Attention is directed to the mounting cost of our annual sessions. Two factors are accountable. One, lessened revenue from commercial exhibits due to retrenchment on the part of business firms. Secondly, for the past three years we have been paying from four hundred to seven hundred dollars for rental of auditoriums. This, I feel, is wholly unreasonable. There is but one way to end these rental rates and that is to hold our meetings in cities where auditoriums are made available without cost.

MEDICO-LEGAL DEFENSE

Malpractice suits, the majority without merit, are being instituted against members in increasing numbers. In these times we cannot look for their abatement. Large verdicts are being rendered. Within the month two verdicts of \$13,000 were rendered in one county with four more cases pending and all instituted by one firm of attorneys. Within the month there has been a conference of insurance officials to consider raising the premium rates \$10.00 per policy. If our members obtained no other benefit from their dues, the efficient services rendered by our Medico-Legal committee would be handsome returns. Until one has had a suit filed against him, he does not appreciate the legal assistance that comes to his aid and the protection that is accorded.

In place of reducing dues, I recommend the con-

sideration of increasing them to \$15.00 or \$20.00 per year. Of this assessment, five or ten dollars should be placed in a reserve fund for payment of judgment benefits. I am of the opinion that the legal features of such a plan can be surmounted. If this is accomplished then members can cancel their policies, thereby producing an annual saving for each member of twenty to thirty dollars per year.

EXPENSE ACCOUNTS

The Society justly reimburses members for expenses incurred in discharging committee duties or when transacting society business. It is highly desirable that a uniform schedule for expense accounts be approved. The following schedule is suggested:

Mileage, six cents per mile one way.
Eight dollars per day for room and meals.
Single meals, \$1.50.
Incidentals, \$1.00 per day.
Actual railroad and pullman fare when traveling by train or bus.

With your approval, a uniform account statement will be provided for the rendering of expense accounts.

RECOMMENDATIONS

The following recommendations are respectfully submitted for consideration and the issuance of instructions:

1. That the Legislative Committee be requested to promptly institute a conference or conferences with the commission on Medical Legislation appointed by the legislature in order that an agreement may be reached upon legislation to be recommended to the new legislature. That in the determination of legislative policies the Committee secure the cooperating support and advice of every county society through the Secretary's office.

2. That a uniform expense account schedule be adopted.

3. That the Secretary be instructed to investigate the legal factors related to creating a Medico-Legal Judgment Fund and report his findings to the Council for transmission to the House of Delegates.

4. That book reviews in the Journal be limited to publishers who advertise in the Journal. At present publishers receive valuable space at an annual expense to the Journal of approximately \$200 to \$250.00 per year. Were this space paid for at advertising rates, the annual income would be about \$1,500.

5. That expenses of but one invited guest be allowed to each scientific section and not to exceed \$100.00.

CONCLUSIONS

As a society today we are standing upon the highest mountain peak that we have ever attained. As we look back over the road of years we can discern certain peaks that lie down and beyond in that great range of time. They stand out and mark certain epochs, certain achievements in the history of our society. They are enduring monuments to which we point with pride and satisfaction. Today, just as truly as in the past, on the present mountain peak we are recording an epoch in our Society History. Our individual and collective judgment sanely exercised and wisely applied will determine whether it will erupt, destroy itself and leave a volcanic crater with dark abyssal depths. It is for us, the present day members, to determine whether posterity, looking back over the battlements of heaven and time, shall approve our actions this year and point with pride to this epochal mountain peak, or blushing with chagrin appraise our acts, in this era of world unrest, as having failed to be consistent with the sacred traditions of the profession.

My plea is that we recognize the present distracting conditions, that we approach the pressing problems with calm, deliberative judgment while we formulate our guiding plans and policies in order that it may be said after the years have passed: "They stood the test."

Respectfully submitted,
F. C. WARNSHUIS, Secretary.

January 5, 1932.

Michigan State Medical Society,
Grand Rapids, Michigan.
Gentlemen:

We have examined the accounts of the Michigan State Medical Society for the year ended December 29, 1931.

In addition to an examination of the accounts pertaining to the assets and liabilities of the Society at December 29, 1931, we have reviewed the operating accounts and have made a test check of the recorded cash transactions for the year then ended. The scope of our work and the extent of the detailed records examined are outlined in later sections of this report.

The Society was incorporated in June, 1910, under the Michigan Act providing for the incorporation of associations not for pecuniary profit. The purpose of the Society is the federation and protection of members of the medical profession and the extension of medical knowledge.

FINANCIAL ANALYSIS

A balance sheet is included herein which, in our opinion, shows the financial position of the Society as of December 29, 1931, on the basis outlined in this report. The following affords a comparison of the assets and liabilities at the beginning and end of the fiscal year:

Assets

	Dec. 29, 1931	Dec. 29, 1930	Increase Decrease
Cash on deposit.....	\$	380.74	\$ 380.74
Notes and accounts receivable, less allowance for doubtful	\$ 985.07	1,622.33	677.26
Due from Children's Fund of Michigan		1,500.00	1,500.00
Securities:			
Bonds (at cost) plus unclipped coupons	\$43,518.75	\$46,225.55	\$ 2,706.80
Less allowance to reduce to approximate market value	16,159.25	4,614.55	11,544.70
	\$27,359.50	\$41,611.00	\$14,251.50
Contract for medical history..	3,000.00	4,500.00	1,500.00
	\$31,344.57	\$49,654.07	\$18,309.50

Liabilities

Bank overdraft	\$ 12.87		\$ 12.87
Accounts payable:			
For services, etc.....	1,483.71	\$ 1,500.00	16.29
To Joint Committee on Public Health Education	1,037.41	2,111.85	1,074.44
To Couzens' Foundation....	468.31	1,775.46	1,307.15
Advances for reprints and advertiser's credit balance	145.76	51.00	94.76
	\$ 3,135.19	\$ 5,438.31	\$ 2,303.12
Reserves:			
For Medico Legal Defense Fund	\$11,575.17	\$19,394.06	\$ 7,818.89
For medical history.....	3,000.00	4,500.00	1,500.00
	\$14,575.17	\$23,894.06	\$ 9,318.89
Net worth	13,621.34	20,321.70	6,700.36
	\$31,344.57	\$49,654.07	\$18,309.50

Advertisers' accounts receivable in the amount of \$1,025.07 were analyzed according to age and are summarized as follows:

	Date of Charge Dec. 29, 1931		Dec. 29, 1930	
	Amount	Per cent	Amount	Per cent
December	\$ 690.99	67.41%	\$ 738.17	64.06%
October and November..	100.00	9.75	53.75	4.66
July, August and September	97.50	9.51	36.00	3.12
January 1 to June 30....	66.08	6.45	206.41	17.92
Prior to January 1.....	70.50	6.88	118.00	10.24
TOTAL	\$1,025.07	100.00%	\$1,152.33	100.00%

Subscriptions for medical history represent, for the most part, amounts due for copies of the history delivered during the year 1930.

Based upon our analysis of the accounts and conference with your Secretary, it is our opinion that the allowance in the amount of \$250.00 is sufficient to cover any losses from uncollectible accounts anticipated at December 29, 1931.

A schedule included hereinafter sets forth the par value, cost and approximate market value of the bonds owned by the Society at December 29, 1931. The market values shown are based upon December 29 closing market quotations for listed securities and upon information obtained from brokers relative to the most recent bid or sales prices on unlisted bonds. An allowance in the amount of \$16,159.25 has been provided to reduce the book value of the bonds to the approximate market value at December 29, 1931. A portion of the foregoing allowance, in the amount of \$6,755.50, represents the shrinkage in market value of bonds set aside as property of the Medico Legal Defense Fund and was accordingly charged against the account carried with that fund on the books of the Society.

The Contract for medical history, in the amount of \$3,000.00, represents the unliquidated portion of a contract between the Society and the Bruce Publishing Company for 750 sets of the medical history at \$10.00 each. A reserve, in the amount of \$7,500.00, representing the maximum liability under this contract was established in 1930 in accordance with a resolution passed by the Council on September 14, 1930. During the fiscal year 1931, the Society paid \$1,500.00 on this contract, making a total of \$4,500.00 paid to date and leaving an unpaid balance of \$3,000.00. Data examined by us indicates that the Bruce Publishing Company undertook the publication of this history on a profit-sharing basis and that, at the present time, there is no further legal liability of the Society therefor. Approximately 323 sets of the history have been delivered to date, leaving approximately 127 sets paid for by the Society but undelivered at December 29, 1931. Owing to the small number of histories sold during the fiscal year 1931 and the uncertainty of future sales, no consideration has been given herein to the contingent asset represented by these unsold histories.

Provision has been made, as far as we could ascertain, for all known liabilities of the Society at December 29, 1931.

Schedules included hereinafter set forth summaries of the recorded transactions affecting the funds of the Joint Committee on Public Health Education and the Couzens' Foundation which were handled by the Society during the fiscal year and the liability of the Society to those organizations at December 29, 1931.

Fifteen per cent of the membership fees collected are appropriated for the Medico Legal Defense Fund. A summary of the changes affecting this fund during the fiscal year is included herein, showing a net reduction of \$7,818.89, of which \$6,755.50 represents a provision for shrinkage in the market value of its bonds, as hereinbefore explained.

The net worth of the Society decreased \$6,700.36 during the fiscal year, of which \$1,911.16 represents

the excess of expenses over income and \$4,789.20 is due to an additional provision for the reduction of bonds owned to approximate market value.

Surety bonds in favor of the Society in the amounts of \$25,000.00 and \$10,000.00 covering Dr. John R. Rogers and Dr. F. C. Warnshuis, respectively, were examined by us.

OPERATIONS

We present elsewhere in this report a statement of income and expense, setting forth the results from operations for the year ended December 29, 1931. The scope of our examination in connection with the preparation of this statement consisted of test checks of the data entering into the cash and operating transactions as hereinafter outlined. A comparison of the income and expenses for the fiscal years ended December 29, 1930, and December 29, 1931, is shown in an exhibit included hereinafter, from which the following summary is taken:

	Fiscal Year Ended		Increase
	Dec. 29, 1931	Dec. 29, 1930	
Memberships, dues and journal subscriptions.....	\$27,216.32	\$28,834.60	\$1,618.28
Advertising and reprint sales..	10,318.01	11,108.22	790.21
Sales of medical history.....	228.00	3,045.00	2,817.00
Interest and profit on securities	1,699.90	1,844.99	145.09
Total Income	\$39,462.23	\$44,832.81	\$5,370.58
Expenses	41,373.39	42,316.56	943.17
Net Deficit or Income.....	\$ 1,911.16	\$ 2,516.25	\$ 4,427.41

SCOPE OF EXAMINATION

The scope and nature of our examination are outlined in the following comments:

The recorded cash receipts during the fiscal year were traced to the bank deposits shown by the bank statements on hand in the Society's files. The recorded cash disbursements for two months during the year, selected at random were found, with minor exceptions, to be supported by canceled checks, invoices, etc.

Members' notes receivable were examined by us. Advertisers' accounts and subscriptions for medical history were found to be in agreement with a trial balance of the individual accounts. Advertisers' accounts were analyzed as to age, as hereinbefore outlined, but we did not correspond with the recorded debtors to verify the unpaid balances shown.

Bonds owned by the Society were inspected by us on December 30, 1931, and the approximate market values thereof were computed as previously outlined.

The bank overdraft was verified by direct correspondence with the Society's depository and reconciliation of the balance reported by it with the overdraft shown herein.

Accounts payable were found to be in agreement with a trial balance of unpaid invoices in the Society's files.

In addition to a test of the cash transactions as heretofore outlined, membership fees, journal subscriptions and dues credited to the Medico Legal Defense Fund were tested by comparison with the Society's membership records. Interest on investments belonging to the General Fund of the Society and the Medico Legal Defense Fund are credited as received and were proved by comparison with a summary of the interest coupons maturing during the fiscal year. Major items entering into the various expense accounts were investigated by us and all items so examined were found to be in order.

Very truly yours,

ERNST & ERNST,
Certified Public Accountants.

BALANCE SHEET
MICHIGAN STATE MEDICAL SOCIETY
DECEMBER 29, 1931

Assets		
Notes and Accounts Receivable		
Members' notes	\$ 50.00	
Advertisers' accounts	1,025.07	
Subscriptions for medical history	160.00	
Less allowance for doubtful	250.00	
	\$ 1,235.07	
		\$ 985.07
Securities		
Bonds—at cost	\$43,518.75	
Less allowance to reduce to approximate market value	16,159.25	
		27,359.50
Contract		
For medical history		3,000.00
		\$31,344.57
Liabilities		
Bank Overdraft		\$ 12.87
Accounts Payable		
For services, etc.	\$ 1,483.71	
Joint Committee on Public Health Education	1,037.41	
Couzens' Foundation	468.31	
Advances made for reprints	95.75	
Advertiser's credit balance	50.01	
		3,135.19
Reserves		
For Medico Legal Defense Fund	\$11,575.17	
For medical history	3,000.00	
		14,575.17
Net Worth		
Balance at Dec. 30, 1930	\$20,321.70	
Deduct:		
Net deficit for the fiscal year ended Dec. 29, 1931	\$1,911.16	
Additional provision for reduction of bonds to market value	4,789.20	
	6,700.36	
		13,621.34
		\$31,344.57

This balance sheet is subject to the comments contained in this report.

INCOME AND EXPENSE
MICHIGAN STATE MEDICAL SOCIETY

	Fiscal Year Ended		
	Dec. 29, 1931	Dec. 29, 1930	Increase Decrease
Membership fees	\$19,087.00	\$20,214.75	\$1,127.75
Journal subscriptions	8,129.32	8,619.85	490.53
Advertising sales	8,849.23	9,180.55	331.32
Reprint sales	1,468.78	1,927.67	458.89
Interest on investments	1,699.90	1,744.99	45.09
Sales of medical history	228.00	3,045.00	2,817.00
Profit on sale of securities		100.00	100.00
Total Income	\$39,462.23	\$44,832.81	\$5,370.58

BONDS OWNED
MICHIGAN STATE MEDICAL SOCIETY
DECEMBER 29, 1931

	Interest	Maturity	Par Value	Cost	Approximate Market Value
Medical Society—General Fund					
United Light and Power	5½%	1959	\$ 2,000.00	\$ 1,850.00	\$ 1,630.00
Peoples Light and Power Corporation	5½%	1941	1,000.00	970.00	300.00
Broadway Building—First Mortgage	6	1946	2,000.00	2,000.00	1,560.00
Pennsylvania Railroad Company	5	1964	3,000.00	3,093.75	2,310.00
Grand Rapids Affiliated Corporation	5	1955	6,000.00	6,000.00	5,400.00
National Electric Power Company	5	1978	5,000.00	4,725.00	1,900.00
Community Power and Light Company	5	1957	2,000.00	1,940.00	1,042.50
American Telephone and Telegraph Company	6	1935	2,000.00	2,120.00	1,930.00
Palmer Building Corporation	6	1935	2,000.00	2,000.00	2,000.00*
Herald Square Building	6	1948	2,000.00	2,000.00	600.00
Associated Gas and Electric Corporation	5	1950	2,000.00	1,800.00	745.00
New England Gas and Electric Company	5	1950	1,000.00	910.00	587.50
			\$30,000.00	\$29,408.75	\$20,005.00
Medico Legal Defense Fund					
Peoples Light and Power Corporation	5½%	1941	\$ 1,000.00	\$ 970.00	\$ 300.00
Grand Rapids Affiliated Corporation	5	1955	1,000.00	1,000.00	900.00
National Gas and Electric Corporation	6	(Matured Feb. 1, 1931) (Extended to Feb. 1, 1933)	2,400.00	2,400.00	192.00
New York Central Railroad Company	4	1908	2,000.00	1,930.00	1,375.00
Michigan Fuel and Light Company	6	1950	3,000.00	2,985.00	1,200.00
American Telephone and Telegraph	5	1965	2,000.00	1,990.00	1,920.00
International Telephone and Telegraph Company	5	1955	2,000.00	1,925.00	880.00
New England Gas and Electric Company	5	1950	1,000.00	910.00	587.50
			\$14,400.00	\$14,110.00	\$ 7,354.50
Total			\$44,400.00	\$43,518.75	\$27,359.50

*No market quotation available.

Expense

Secretary's salary	\$ 6,500.00	\$ 6,500.00	
Stenographers' salaries	3,016.00	2,905.00	\$ 111.00
Society's expense	4,085.92	6,614.51	2,528.59
Office rent and telephone	1,800.00	1,200.00	600.00
Postage and printing	405.00	225.00	180.00
Editor's salary	3,500.00	3,500.00	
Journal expense	10,187.52	10,712.78	\$25.26
Editor's expense	854.24	860.88	6.64
Reprint expense	1,325.55	1,740.87	415.32
Council expense	2,036.91	1,795.17	241.74
Delegates to American Association	544.01	288.19	255.82
Legislative committee	2,630.87	258.85	2,372.02
Post graduate medical conference	769.62	352.41	417.21
Annual meeting	1,556.31	1,647.12	90.81
Publishing and editorial cost of medical history	1,609.84	3,715.78	2,105.94
Cancer committee and Health Agency survey	148.88		148.88
Civic and industrial relations committee	298.02		298.02
Radio committee	104.70		104.70
Total Expenses	\$41,373.39	\$42,316.56	\$ 943.17
Net Deficit or Income	\$ 1,911.16	\$ 2,516.25	\$4,427.41

SUMMARY OF INCOME AND DISBURSEMENTS—
JOINT COMMITTEE ON PUBLIC HEALTH
EDUCATION

MICHIGAN STATE MEDICAL SOCIETY
YEAR ENDED DECEMBER 29, 1931

Balance Due Joint Committee, Dec. 29, 1930

Income

Children's Fund of Michigan	\$1,500.00	
Detroit News	440.00	
University of Michigan	125.00	
Michigan State Dental Society	125.00	
Michigan Tuberculosis Association	75.00	
Michigan State Nurses Association	25.00	
		\$2,290.00
Less refund to Michigan State Medical Society	750.00	
		1,540.00
		\$3,651.85

Disbursements

Salaries	\$2,100.00
W. D. Henderson (prizes)	300.00
Donald C. Lyons (articles)	96.00
Postage	45.76
Alumni Press	24.75
Miscellaneous	47.93
	2,614.44
Balance Due Joint Committee Dec. 29, 1931	\$1,037.41

SUMMARY OF INCOME AND DISBURSEMENTS—
COUZENS' FOUNDATION
MICHIGAN STATE MEDICAL SOCIETY
YEAR ENDED DECEMBER 29, 1931

Income
Children's Fund of Michigan.....\$3,000.00

Disbursements
Sundry disbursements prior to 1931.....\$1,224.54
Disbursements for 1931:
Printing.....\$ 34.00
Lectures and traveling expense.....1,273.15
1,307.15
2,531.69
Balance, Dec. 29, 1931.....\$ 468.31

SUMMARY OF CHANGES IN MEDICO LEGAL
DEFENSE FUND RESERVE
MICHIGAN STATE MEDICAL SOCIETY
YEAR ENDED DECEMBER 29, 1931
Balance, Dec. 30, 1930.....\$19,394.06

Additions
Dues.....\$4,805.00
Interest received.....846.35
Profit on sale of securities.....43.20
5,694.55
\$25,088.61

Deductions
Salaries.....\$1,119.47
Legal services.....5,492.75
Dues returned.....27.75
Postage and miscellaneous.....117.97
\$6,757.94
Provision for reduction of bonds to approximate market value.....6,755.50
13,513.44
Balance, Dec. 29, 1931.....\$11,575.17

TRIAL BALANCE
MICHIGAN STATE MEDICAL SOCIETY
DECEMBER 29, 1931

	Debits	Credits
Old Kent Bank.....		\$ 12.87
Accounts Receivable.....\$ 879.31		
Advertising Sales.....	8,849.23	
Annual Meeting.....	1,556.31	
Bond Account—Society.....	22,194.20	
Bond Account—Defense.....	16,710.00	
Cancer Committee.....	39.98	
Civic and Industrial Relations Comn.	298.02	
Council Expense.....	1,927.75	
Couzens Foundation.....		468.31
Delegates to Am. Medical Assn.	544.01	
Dues.....		19,057.00
Editor's Salary.....	3,500.00	
Editor's Expense.....	854.24	
Health Agency Survey.....	108.90	
History—Accounts Receivable.....		68.00
History—Expense.....	1,609.84	
History—Contract.....	4,500.00	
History—Reserve.....		4,500.00
Interest Account—Society.....	1,699.90	
Joint Committee.....		1,037.41
Journal Expense.....	10,187.52	
Journal Subscriptions.....		8,116.82
Legislative Committee.....	2,630.87	
Medico-Legal Defense.....		3,030.92
Medico-Legal—Reserve.....		16,666.80
Office Rent.....	1,800.00	
Postage.....	405.00	
Postgraduate Conferences.....	769.62	
Present Worth.....		20,321.70
Provision for Doubtful Accounts.....		250.00
Radio Committee.....	104.70	
Reprint Expense.....	1,325.55	
Reprint Sales.....		1,468.78
Society Expense.....	4,085.92	
Secretary's Salary.....	6,500.00	
Stenographers.....	3,016.00	
	\$85,547.74	\$85,547.74

Journal Expense

January	A. P. Johnson Co.....\$ 5.00	
	Bruce Publishing Co.....660.00	
	Addressograph Co.....2.94	
	Register of Copyrights.....2.00	
		\$ 669.94
February	Bruce Publishing Co.....\$ 730.14	
	Register of Copyrights.....2.00	
		\$ 732.14
March	Bruce Publishing Co.....\$1,197.61	
	Register of Copyrights.....2.00	
		\$ 1,199.61
April	Bruce Publishing Co.....\$ 686.49	
	Register of Copyrights.....2.00	
	Geo. G. Ma Dan & Co.....27.75	
		\$ 716.24
May	Bruce Publishing Co.....\$1,059.13	
	Register of Copyrights.....2.00	
	J. H. Dunlap.....2.00	
		\$ 1,063.16
June	Bruce Publishing Co.....\$ 805.16	
	Register of Copyrights.....2.00	
		\$ 807.16
July	Bruce Publishing Co.....\$ 805.93	
	Register of Copyrights.....2.00	
		\$ 807.93
August	Bruce Publishing Co.....\$ 988.93	
	Register of Copyrights.....2.00	
		\$ 990.93
September	Bruce Publishing Co.....\$ 798.31	
	Register of Copyrights.....2.00	
		\$ 800.31
October	Bruce Publishing Co.....\$ 762.71	
	Register of Copyrights.....2.00	
		\$ 764.71
November	Bruce Publishing Co.....\$ 985.96	
	Register of Copyrights.....2.00	
		987.96
December	Bruce Publishing Co.....\$ 924.79	
	Register of Copyrights.....2.00	
		\$ 926.79
		\$10,466.88
	Credits—for cuts.....	279.36
		\$10,187.52

Council Expense—1931

January	Otto L. Ricker.....\$ 46.00	
	C. A. Neafe.....7.45	
	T. Heavenrich.....11.50	
	Henry Carstens.....7.00	
	University of Mich. Union.....40.05	
	B. H. Van Leuven.....35.50	
	B. R. Corbus.....89.11	
		\$ 236.61
February	J. Earl McIntyre.....\$ 26.44	
	C. E. Boys.....16.74	
	C. F. Moll.....36.76	
	Wayne Co. Medical Society.....35.00	
	F. C. Warnshuis.....34.19	
		\$ 149.13
March	R. A. Burke.....\$ 50.00	
	Henry Cook.....19.00	
	Julius Powers.....20.00	
	F. C. Warnshuis.....12.80	
		\$ 101.80
May	F. C. Warnshuis.....\$ 25.00	
	F. C. Warnshuis.....26.65	
	P. R. Urmston.....86.58	
	C. A. Neafe.....2.00	
	Pantlind Hotel.....28.60	
	Donaldson-Connolly.....54.00	
	Tish-Hine.....15.00	
		\$ 237.83
June	E. A. Oakes.....\$ 133.75	
	C. F. Moll.....13.76	
	B. R. Corbus.....99.45	
		\$ 246.96
July	F. C. Warnshuis.....\$ 9.60	
	R. C. Stone.....184.98	
		\$ 194.58
August	G. W. Woodcock.....\$ 24.00	
	George LeFevre.....75.00	
		\$ 99.00

September					
Henry	Cook	.....	\$ 30.85	\$	30.85
October					
	B. R.	Corbus.....	\$250.00		
	O. L.	Ricker.....	86.47		
	F. C.	Warnshuis.....	24.20		
	R. A.	Burke.....	40.00		
				\$	410.67
December					
	R. C.	Stone.....	\$ 170.60		
	C. E.	Boys.....	49.72		
				\$	220.32
					<u>\$1,927.75</u>

Annual Meeting Expense—1931

		Debits	Credits
February	Gen. X-ray—Exhibit Space—		
	1930		\$ 12.50
April	Secy.—Trip to Pontiac.....	\$ 26.49	\$ 26.49
May	Hotel Statler—Section Offi- cers	35.50	
	Carl F. Snapp.....	7.47	
	H. J. Bisbee.....	4.50	
		\$ 47.47	
June	F. J. Mester.....	\$ 3.75	
	Thomas Blue Print Shop.....	6.00	
	Exhibit Space sold.....		\$ 9.75
			\$137.50
July	Secretary	\$ 26.30	\$ 26.30
	Exhibit Spaces sold.....		\$ 75.00
August	Exhibit Spaces sold.....		\$ 25.00
September	A. P. Johnson Co.....	15.20	
	H. O. Westervelt.....	42.92	
	Milo Art Studio—Booths.....	200.00	
	Lois Stewart.....	6.00	
	Hotel Waldron.....	179.84	
	Hotel Waldron.....	28.10	
	Carl Vedink—Labor.....	45.25	
	Express	25.20	
	Dr. Wm. German.....	36.69	
	Express	24.62	
	Exhibit Spaces sold.....	\$ 603.82	\$177.50
October	Caroline Hoffman.....	\$ 20.48	
	Elizabeth Halfpenny.....	15.00	
	Veta Winegarden.....	15.00	
	Marvel Leonard.....	15.00	
	Ruth Conover.....	15.00	
	Arthur H. Curtis.....	40.00	
	Harold A. Furlong.....	3.75	
	Peter C. Kronfeld.....	40.00	
	Fred L. Adair.....	31.00	
	John A. Bigler.....	31.87	
	Bruce Publishing Co.....	99.45	
	Bronson Vrothers.....	85.00	
	Loyal Davis.....	37.28	
	Golden & Boter.....	3.50	
	Charles C. Kiely.....	35.00	
	Masonic Temple.....	350.00	
	Master Reporting Co.....	150.95	
	W. O. Mullin.....	26.66	
	J. A. Myers.....	63.80	
	First Presbyterian Church.....	70.00	
	Dallas K. Phemister.....	28.00	
	Service Sign Co.....	29.25	
	Walter M. Simpson.....	32.00	
	W. P. Smith.....	10.00	
	Hotel Statler—Guests.....	57.25	
	St. Louis Button Co.....	45.05	
	Exhibit Spaces sold.....	\$1,350.29	\$175.00
November	Victor Moyer.....	\$ 8.00	
	First Baptist Church.....	90.00	
	Error in check issued.....	\$ 5.60	
	Rebate on Tel. Calls.....	1.71	
			\$ 7.31
December	Robert Isbell.....	\$ 4.00	\$ 4.00
		\$2,166.12	\$609.81
		609.81	
		\$1,556.31	

Couzens Foundation

Balance from 1930.....	\$ 275.46
February 28, 1931—Check received	1,500.00

January			
	O. L. Ricker.....	\$ 25.00	
	A. P. Johnson Co.....	16.15	
	W. S. O'Donnell.....	61.00	
	Harther L. Keim.....	61.00	
	L. A. Schwartz.....	12.20	
	J. E. Gordon.....	73.74	
	Udo J. Wile.....	55.00	
		<hr/>	
			\$ 304.09
February			
	Alumni Press.....	\$ 3.75	\$ 3.75
March			
	David J. Levy.....	\$ 65.00	
	John E. Gordon.....	61.00	
	F. B. Wilson.....	174.25	
	P. F. Morse.....	175.52	
	Max N. Peet.....	168.57	
	J. D. Bruce.....	140.87	
	A. P. Johnson Co.....	7.60	
		<hr/>	
			\$ 792.81
May			
	A. P. Johnson Co.....	\$ 6.50	\$ 6.50
August			
	R. C. Stone.....	\$100.00	
	B. R. Corbus.....	50.00	
		<hr/>	
			\$ 150.00
September			
	G. C. Penberthy.....	\$ 50.00	\$ 50.00
		<hr/>	
			\$1,307.15
			<hr/>
			\$1,775.46
			<hr/>
			1,307.15
			<hr/>
	Balance on hand.....		\$ 468.31

Delegates to American Medical Association

June—1931		
H. A. Luce.....	\$ 69.91	
Carl Moll	101.26	
C. S. Gorsline.....	108.04	
		\$279.21
July—1931		
A. W. Hornbogen.....	\$152.09	
J. D. Brook.....	112.71	
		\$264.80
		\$544.01

Civic and Industrial Relations Committee

January	H. S. Collisi.....	\$ 20.11	
	Wayne Co. Medical Society.....	19.80	
	C. W. Brainard.....	8.60	
	Don Kudner	10.40	
			\$ 58.91
February	H. S. Collisi.....	\$ 21.36	
	Wayne Co. Medical Society.....	32.80	
	D. F. Kudner.....	10.80	
			\$ 64.96
March	H. S. Collisi.....	\$ 25.00	
	Collisi.....	5.28	
	C. W. Brainard.....	8.60	
			\$ 38.88
April	H. S. Collisi.....	\$ 5.04	
			\$ 5.04
May	H. S. Collisi.....	\$ 16.63	
	C. S. Gorsline.....	10.10	
	D. F. Kudner.....	10.80	
			\$ 37.53
June	E. I. Carr.....	\$ 13.60	
	Wayne Co. Medical Society.....	22.00	
			\$ 35.60
July	H. S. Collisi.....	\$ 9.44	\$ 9.44
December	H. S. Collisi.....	\$ 34.75	
	Philip Riley.....	6.91	
	A. R. McKinney.....	6.00	
			\$ 47.66
			\$298.02

Legislative Committee

February			
Earl I. Carr.....	\$	88.30	
Taylor Letter Shop.....		29.00	
Secretary		21.39	
			\$ 138.69
March			
Norris-McPherson-Harrington			
Waer—1930 account	\$	700.00	
J. B. Jackson.....		18.54	
A. H. Whittaker.....		426.76	
J. B. Jackson.....		22.35	
A. P. Johnson Co.....		104.41	
Taylor Husted		10.75	
			\$1,282.81

April

J. B. Jackson.....	\$ 3.55
John Sundwall	103.48
E. I. Carr.....	148.83
John Sundwall	26.95

May

A. H. Whittaker.....	\$ 53.30
Bernice N. Hall.....	25.70
Ace Letter Shop.....	77.20
A. H. Whittaker.....	658.93

June

Earl I. Carr.....	\$ 9.05
B. R. Corbus.....	12.00

August

A. H. Whittaker.....	\$ 49.69	\$ 49.69
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November

A. H. Whittaker.....	\$ 2.25
John Sundwall	27.24
Earl I. Carr.....	11.20
	\$ 40.69

Health Agencies Survey

November

C. S. Gorsline.....	\$ 7.20
W. H. Marshall.....	20.95
Secretary	20.50

December

F. A. Baker.....	\$ 6.82
C. S. Gorsline.....	7.36
W. H. Marshall.....	10.40
Secretary	23.83
F. A. Baker.....	11.84
	\$ 60.25

History Expense

March

C. B. Burr.....	\$ 102.34
Bruce Publishing Co.....	1,500.00

October

History Sold	\$ 7.50	\$ 7.50
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Expenses Cancer Committee—1931

March

C. E. Dutches.....	\$ 1.28
C. E. Dutches.....	27.20

May

Advertising Letter Shop.....	\$ 4.75	\$ 4.75
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July

C. E. Dutches.....	\$ 6.75	\$ 6.75
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Medico-Legal Defense

	Debits	Credits
Balance from 1930.....		\$ 2,727.26
Unclipped Coupons.....	\$125.00	\$ 125.00
January		
F. B. Tibbals.....	\$ 11.80	
Postage	70.00	
	\$ 81.80	
Dues Paid		306.00
Interest on Bonds.....		152.50
February		
F. B. Tibbals.....	\$500.00	
Douglas-Barbour	500.00	
	\$ 1,000.00	
Dues Paid		\$ 1,005.00
Interest on Bonds.....		125.82
March		
Return of dues—overpaid..	\$ 1.50	\$ 1.50
Dues Paid		\$ 954.00
April		
Douglas-Barbour	\$375.00	
Douglas-Barbour	175.00	
	\$ 550.00	
Dues Paid		\$ 1,021.50
May		
Douglas-Barbour	\$ 75.00	
Dues Paid		\$ 528.00
June		
W. J. Stapleton.....	\$ 7.20	
Douglas-Barbour	631.00	
Return of dues.....	1.50	
	\$ 639.70	
Dues Paid		\$ 284.50
July		
W. J. Stapleton.....	\$ 10.00	
W. J. Stapleton—Salary.....	202.80	
A. P. Johnson Co.....	7.85	
Douglas-Barbour	500.00	
Douglas-Barbour	312.50	
Return of Dues.....	1.50	
	\$1,034.65	
Dues Paid		\$ 217.00
Interest on Bonds.....		519.50

August

Wm. J. Stapleton.....	\$ 83.33		
Return of Dues.....	2.25		
	<hr/>	\$ 85.88	
Dues Paid			\$ 184.50
Interest			76.73

September

Wm. J. Stapleton.....	\$ 83.33	
Wm. J. Stapleton.....	11.12	
Douglas-Barbour	155.00	
	<hr/>	
	\$ 249.45	
Dues Paid		\$ 135.50

October

Wm. J. Stapleton.....	\$ 83.33
Douglas-Barbour	100.00
Douglas-Barbour	40.00
Douglas-Barbour	390.21
Return of Dues.....	3.00
	\$ 616.54

November

Wm. J. Stapleton.....	\$ 83.33	
Douglas-Barbour	538.49	
	<hr/>	\$ 621.82
Dues Paid		\$ 41.00

December

Wm. J. Stapleton.....	\$ 83.33	
Douglas-Barbour	326.00	
Return of Dues.....	18.00	
	<hr/>	
	\$ 427.35	
Dues Paid		\$ 105.00
Interest on Bonds.....		140.00
Net proceeds from sale of Bonds		2,556.80
Unpaid Bills	\$1,374.55	
	\$6,882.94	\$11,096.11
		6,882.94

Cash on hand.....\$ 4,213.17

Post Graduate Conference

January

A. P. Johnson Co.....	\$ 8.00
Secretary	41.00
N. Sinai	18.08
P. F. Morris.....	11.00
	\$ 78.08

April

Carl D. Camp.....	\$ 9.58	\$ 9.58
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May

Secretary	\$ 16.40
W. G. Maddock.....	7.00
F. A. Collier.....	7.00
	\$ 30.40

June

John Kemper	\$ 28.00
Eugene Potter	14.00
Harther L. Keim.....	48.20
J. E. Gordon.....	51.10
B. R. Corbus.....	132.00
	\$273.30

September

W. J. Cassidy.....	\$ 43.00
J. E. Gordon.....	27.75
	\$ 70.75

October

L. F. Foster.....	\$ 75.00
E. S. Peterson.....	75.00
	\$150.00

November

A. P. Johnson Co.....	\$ 59.00
Hayes Hotel	11.00
	\$ 70.00

December

J. E. Gordon.....	\$137.88
C. H. Westgate.....	4.48
	\$142.36

Credit—University of Michigan...

Joint Committee—Public Health Education

	Debits	Credits
Balance from 1930.....		\$2,111.85
January		
Salaries	\$175.00	\$ 175.00
Detroit News		\$ 90.00
February		
Salaries	\$175.00	
University of Michigan.....	4.93	
	\$ 179.93	
Detroit News		\$ 40.00
Tuberculosis Assn.—Donation		75.00
University of Mich.—Donation		125.00
Mich. State Society—Return on 1930 Donation.....	\$ 750.00	

March			
Salaries	\$175.00	\$ 175.00	
Detroit News		\$ 40.00	
April			
Salaries	\$175.00		
Don C. Lyons.....	44.00		
		\$ 219.00	
Detroit News		\$ 50.00	
Mich. State Nurses Assn.			
—Donation		25.00	
Children's Fund of Mich.—			
Donation		1,500.00	
May			
Salaries	\$175.00		
W. D. Henderson.....	100.00		
Addressing Envelopes.....	3.00		
		\$ 278.00	
Detroit News		\$ 40.00	
Mich. State Dental Society			
—Donation		125.00	
June			
Salaries	\$175.00	\$ 175.00	
Detroit News		\$ 40.00	
July			
Salaries	\$175.00	\$ 175.00	
August			
Salaries	\$175.00	\$ 175.00	
Detroit News		\$ 90.00	
September			
Salaries	\$175.00	\$ 175.00	
October			
Salaries	\$175.00		
Alumni Press	24.75		
Don C. Lyons.....	52.00		
W. D. Henderson.....	200.00		
		\$ 451.75	
Detroit News		\$ 50.00	
November			
Salaries	\$175.00	\$ 175.00	
December			
Salaries	\$175.00		
Postmaster—Ann Arbor	45.76		
Herman Riecker	40.00		
		\$ 260.76	
		\$3,364.44	\$4,401.85
			3,364.44
Balance			\$1,037.41

Society Expense

January			
A. P. Johnson Co.....	\$ 102.20		
Barlow Bros.	19.50		
Tisch Hine	4.10		
Long Distance Calls.....	2.00		
Western Union	5.28		
Secretary—Council Meeting—			
Secy. Conf.	50.00		
H. M. Best	12.16		
E. J. Dougher	10.00		
R. H. Alter.....	6.00		
G. F. Swanson.....	38.30		
Martin Tweedie	23.36		
L. F. Foster.....	17.60		
S. L. Loupee.....	22.72		
Almon Fletcher	48.00		
W. B. Newton	27.50		
W. C. Ellet.....	16.00		
E. M. Highfield.....	18.72		
J. J. McCann.....	17.00		
R. J. Hubbell.....	7.66		
Florence Ames	5.90		
W. E. Ward.....	7.50		
C. A. Neafie.....	16.10		
E. P. Wilbur.....	20.29		
Don Duffie	30.44		
E. F. Sladek.....	39.15		
W. D. Henderson.....	30.00		
		\$ 597.48	
February			
John Whalen	\$ 21.00		
H. F. Becker.....	6.00		
G. C. Stucky.....	10.40		
Donation Perishing Fund—Gogebic	5.00		
Bruce Publishing Co.....	2.75		
A. P. Johnson Co.....	1.50		
Master Reporting Co.....	104.91		
Taylor-Husted	38.20		
Taylor.....	8.50		
H. W. Ten Broek.....	59.00		
Tisch-Hine	3.00		
University of Michigan.....	2.86		
L. D. Calls.....	4.35		
Western Union	3.12		
		\$ 270.59	
March			
Secretary—Meeting with Genesee			
Co.	\$ 16.64		
W. K. Anderson.....	15.00		
Russell Rowland	50.00		
Wm. Hudson	25.00		
Vernon L. Hart.....	25.00		

Geo. L. Waldbott.....	25.00		
Addressograph Co.	2.46		
C. W. Colwell.....	8.00		
E. J. Evans.....	48.00		
A. P. Johnson Co.....	26.70		
Taylor.....	104.50		
L. D. Calls.....	12.25		
Western Union	6.29		
C. Hoffman	1.57		
		\$ 366.41	
April			
Addressograph Co.	\$ 2.24		
Tisch-Hine	3.65		
L. D. Calls.....	6.50		
Burr's Funeral	10.70		
		\$ 23.09	
May			
J. Earl McIntyre.....	\$ 26.00		
A. P. Johnson Co.....	12.40		
Tisch-Hine	1.00		
Alumni Association	6.00		
L. D. Calls—Apr. 17 to May 13	23.80		
Bixby's Office Supply Co.....	5.65		
Addressograph Co.....	1.81		
A. F. Crabb.....	31.21		
Ernst & Ernst.....	198.88		
Remington-Rand	1.25		
Taylor.....	1.00		
Tisch-Hine	3.05		
L. D. Calls—Mar. 19 to Apr. 16	11.25		
Western Union	11.93		
Addressograph Co.	3.00		
		\$ 338.23	
June			
Addressograph Co.	\$ 1.92		
American Medical Association.....	24.00		
Western Union	1.88		
		\$ 27.80	
July			
L. D. Calls.....	\$ 3.95		
Addressograph Co.	1.44		
Bixby's Office Supply Co.....	6.90		
Bixby's Office Supply Co.....	2.30		
A. P. Johnson Co.....	44.60		
Taylor.....	4.30		
Western Union	3.96		
Dave Proos	103.00		
Express	1.42		
Spencer Lens Co.....	63.00		
		\$ 234.87	
August			
Dave Proos	\$ 25.00		
Addressograph Co.	1.26		
A. P. Johnson Co.....	22.74		
W. B. Saunders Co.....	6.50		
Spencer Lens Co.....	308.70		
Taylor.....	2.85		
Tisch-Hine	3.55		
Express	4.49		
Western Union	1.00		
Mailing List	7.00		
Dave Proos	50.00		
		\$ 433.09	
September			
Dave Proos	\$ 15.00		
A. F. Crabb.....	10.00		
A. P. Johnson Co.....	119.60		
L. D. Calls.....	3.35		
H. R. Terryberry	170.00		
Western Union	6.05		
Dave Proos	473.87		
		\$ 797.87	
October			
Addressograph Co.	\$ 2.64		
G. R. Trust Co.....	5.00		
L. J. Schermerhorn.....	35.00		
Taylor.....	8.85		
Tisch-Hine	2.65		
L. D. Calls.....	8.95		
Western Union	1.33		
Marshall Field & Co.....	7.08		
Russell Rowland	50.00		
J. E. Davis	100.00		
O. A. Brines.....	100.00		
		\$ 321.50	
November			
G. R. Insurance Agency.....	\$ 125.00		
A. P. Johnson Co.....	197.65		
C. C. Slemmons.....	1,000.00		
Remington-Rand	25.79		
Richards Storage	4.00		
Taylor.....	4.90		
L. D. Calls.....	2.50		
Secretary—Bay City, Flint,			
Escañaba	36.35		
Railway Express Agency.....	2.79		
		\$1,398.98	
December			
Lettering Tables	\$ 25.00		
Addressograph Co.	2.06		
Bixby's Office Supply Co.....	1.55		
A. P. Johnson Co.....	2.00		

Richard Storage Co.....	2.00
Taylor-Husted	12.85
Taylor's	2.85
Western Union	1.51
C. F. Moll.....	79.85
Taylor's	1.00
Bixby's Office Supply Co.....	3.15
	<u>\$ 133.82</u>
	\$4,943.73

Credits	
Donation to Perishing Fund.....	\$ 5.00
Donation to Joint Committee.....	750.00
J. E. Waddington.....	4.79
Cuts	45.62
Checks—Not cashed in 1930.....	52.40
	<u>\$ 857.81</u>
	\$4,085.92

Expenses—1931

	Editor	Editor Expense	Rent	Postage	Reprint Expense	Secretary	Stenographers
January.....	\$ 291.00	\$ 72.71	\$ 150.00	\$ 50.00		\$ 541.00	\$ 275.00
February.....	291.00	73.86	150.00	30.00	\$ 181.45	541.00	235.00
March.....	291.00	65.31	150.00	25.00		541.00	235.00
April.....	291.00	71.33	150.00	20.00	89.55	541.00	235.00
May.....	291.00	71.79	150.00	20.00	271.85	541.00	275.00
June.....	291.00	72.41	150.00	30.00	154.15	541.00	235.00
July.....	291.00	70.41	150.00	75.00	24.85	541.00	271.00
August.....	291.00	71.93	150.00		46.00	541.00	275.00
September.....	291.00	71.16	150.00	30.00	135.95	541.00	235.00
October.....	291.00	68.16	150.00	30.00	84.00	541.00	275.00
November.....	291.00	73.69	150.00	30.00	244.70	541.00	235.00
December.....	299.00	71.48	150.00		93.05	549.00	235.00
	<u>\$3,500.00</u>	<u>\$854.24</u>	<u>\$1,800.00</u>	<u>\$405.00</u>	<u>\$1,325.25</u>	<u>\$6,500.00</u>	<u>\$3,016.00</u>

2. Chairman Corbus appointed the following committees:

County Societies:

C. E. Boys, Chairman
Harlen MacMullen
C. A. Neafie

Finance:

George L. LeFevre, Chairman
Paul R. Urmston
George C. Hafford

Publication:

James D. Bruce, Chairman
A. S. Brunk
B. H. Van Leuven

These committee appointments were approved.

3. The Council then discussed a plan for organization of the Executive Committee of the Council. Upon motion of Brunk-Powers, the Council resolved that the Executive Committee would be composed of the Chairmen of the Standing Committees of the Council, the Chairman and Vice Chairman of the Council, and Dr. Henry Carstens of Detroit.

4. Dr. Frank J. Kelly, Treasurer of the Wayne County Medical Society, appeared before the Council and presented the request of the Wayne County Medical Society, together with certain reasons, for a reduction of state dues to \$7.50 per year. After discussion with Dr. Kelly the request of the Wayne County and that of Jackson County were referred to the Finance Committee.

5. The editor, Dr. J. H. Dempster, presented the following report:

THE EDITOR'S REPORT

To the Members of the Council of the Michigan State Medical Society:

The editor's report seems to be more or less a superfluous matter considering the fact that he has

a habit of reporting each month. In other words the Journal as received is his report. A few statistics might not be wholly uninteresting. The Journal of the Michigan State Medical Society for 1931 contained 980 pages. This is the largest volume ever gotten out in the history of this Society, being 20 pages larger than 1930. The editorials numbered 96. Regarding their quality your editor has no comment to make. He has endeavored to confine them largely to subjects with which he feels more or less conversant and hopes that nothing premature or foolish has appeared in the editorial pages that would compromise the fair name of the Michigan State Medical Society. He has endeavored to edit all copy carefully. The task for the most part has not been difficult although in several instances writers of contributed papers have taken occasion to make changes in the galley proof; in two instances in particular the articles had to be almost entirely reset. I have commented editorially on the preparation of scientific papers, particularly on page 465 of Volume XXX. If contributors would exercise greater care with their copy before sent to the printer much of the expense of resetting could be eliminated. This refers to changes that are made which are in the line of improving the diction or composition.

Otherwise the Journal is before you. Suggestions for its improvement will be welcomed.

Respectfully yours,

J. H. DEMPSTER.

This report was referred to the Publication Committee.

6. Dr. W. J. Stapleton, Chairman of the Medico-legal Committee, made a verbal report of the activities of his committee during the past year. Dr. Stapleton presented in detail the problems confronting the committee, the cases that the committee had handled and outlined the policies that were being observed by the committee. Following a general discussion the report of the Medico-legal committee was referred to the Council committee on County Societies.

7. The Secretary presented the following resignation from the Treasurer, Dr. John R. Rogers:

Grand Rapids, Mich.
December 21, 1931

Dr. F. C. Warnshuis,
Secretary of the Michigan State Medical Society
1508 G. R. National Bank Building
Grand Rapids, Michigan
Dear Dr. Warnshuis:

I hereby tender to the Council of the Michigan State Medical Society my resignation from the office of Treasurer of the Society, and respectfully request that it be acted upon at the meeting of January 8.

Will you be kind enough to bring this matter before the Council.

Sincerely yours,
JOHN R. ROGERS, *Treasurer.*

Upon motion of Powers-LeFevre, the Council accepted the resignation and directed the Secretary to spread upon the minutes the appreciation of the services that Dr. Rogers had rendered to the society and also to convey the Council's appreciation to Dr. Rogers.

8. The Secretary presented a communication from Dr. W. C. Ellet relative to payment of dues of twelve members of the Berrien County Medical Society. These dues have been paid by members, have been deposited in the bank to the credit of the county society and a check had been forwarded to the State Secretary. The State Secretary deposited the check, but it was returned because of the closure of the bank upon which it was drawn, thereby losing the funds of these members. Dr. Ellet personally offered to give his personal note to reimburse the State Society for the dues of these members. After discussion it was moved by Neafie-Cook that the dues of these members be credited and charged to the general account of the society, and that Dr. Ellet be relieved of any indebtedness; that in the event the funds of the county society were released by the defaulting bank the Society should then remit these dues.

9. The Secretary presented the following list of names which had been elected to honorary membership by the House of Delegates at the 1931 Annual Meeting. On motion of Heavenrich-Van Leuven these were approved and the Secretary directed to transfer these members to the honorary list of the Society.

Duncan A. Cameron, Alpena County, Alpena
A. L. Roller, Kent County, Grand Rapids
S. L. Rozema, Kent County, Grand Rapids
G. O. Switzer, Mason County, Ludington
Wilbur F. Reed, Northern Michigan, Cheboygan
Fred W. Rogers, Jackson County, Jackson
Chester H. Sample, Saginaw County, Saginaw
J. S. Platt, St. Clair County, Port Huron
J. F. Doudna, Tri County, Lake City

10. The Secretary presented a communication from the Bruce Publishing Company

in which they tendered a voluntary reduction thirty-five cents (35c) per page on the printing cost of the Journal.

11. The Council recessed at 12:45 to reconvene at 2:30 P. M.

12. Chairman Boys of the committee on County Societies presented the following report—

COUNTY SOCIETIES

Your committee gives a general endorsement of the report of the Secretary insofar as related to the subjects assigned to this committee.

We endorse the plan to postpone the Annual Conference of County Secretaries, and suggest the recommendation of the Secretary that councilors meet with the secretaries of the county societies in their district during the months of February and March for the purpose of discussing the activities of both the County and the State Society.

We endorse the Secretary's comments and recommendations made upon the subject of the Standing Committees of the Society. We approve the plan of continuing to inform the profession as to the benefits to be derived from membership in the Michigan State Medical Society.

We would recommend the distribution of the charts, prepared by the Secretary and as published in the January issue of the State Journal, to the secretaries of county societies and recommend that they serve as a basis of discussion at one of the county society meetings.

Referring to the matter of scientific programs your committee appreciates the difficulty and importance of arranging programs for the smaller county units and we feel that the State Society could function in this matter in two ways. First, by encouraging fusion of such societies for holding of joint meetings; second, by the ownership and release of films, slides and other material, and perhaps providing for speakers for special occasions. We would recommend that, when the financial condition of the society permits, a film library would be established.

We endorse the comments of the Secretary relative to frequent publication in the Journal of the activities of the Society and the work that is being accomplished by committees.

We endorse the comments made by the Secretary relative to the cost of annual meet-

ings and advance the suggestion that where rental costs of auditoriums are charged this expense be borne by the local society of the city where the annual meeting session is held.

Relative to Medico-legal defense, we urge that greater effort be made to acquaint the local societies with the problems of this feature of organizational work, and it is the thought of your committee that this could be accomplished by more frequent presentation of the subject on the programs of the local societies. We would recommend that each councilor present this matter at least once a year to all of the societies in his councilor district.

(Signed) C. E. BOYS, *Chairman*
C. A. NEAFIE
HARLEN MACMULLEN

After discussion engaged in at length, upon motion of Cook-Urmston, the report of this committee was approved and adopted.

PUBLICATION COMMITTEE

13. The Chairman of the Publication committee made the following report:

During the past year we have published twelve numbers of the Journal with an average of 82 pages for each number. This is the largest volume in the history of the Michigan State Medical Society. Necessity will probably call for a reduction in the number of pages during the present year. This will mean not only a reduction in the number of original articles printed but also in the editorial matter and excerpts from other journals and publications. There will be no sacrifice in the present high tone of the Journal but rather a greater discrimination in selection of material. The same fine grade of paper and the same typographical excellence will be maintained.

While the contributed articles and editorials over which the editor has supervision are being indexed, it seems fitting that county society notes and contributions, together with other material for which the secretary assumes responsibility, be given equal recognition in the index. This will make for much more convenient reference.

The 1931 volume contained 104 half-tone illustrations and 77 line drawings. The cost of these has been borne by the contributors. The editor has drawn attention to instances in which illustrations have consisted of photographs of faces in which there is a possibility of recognizing the subject and suggests that contributors should obtain permission, in writing, to use photographs for illustrations, or to disguise the features so to render identification impossible.

The proof reading has been satisfactory to the editor. The first proofs are read and revised by the publisher's proof reader, then mailed to the authors for further revision. The author returns them to the editor who, in turn, revises the page proofs when the papers are arranged in the form for printing. In several instances authors have made very drastic changes in the subject matter of their articles after receiving their proofs. This, of course, necessitates unnecessary expense as well as loss of time

in resetting the article. The trouble could be obviated if authors would exercise greater care in the organizing and writing of their papers.

The long experience of the editor has seemed to warrant your Committee in permitting great freedom in the matter of editorial policy. He has, however, submitted for review most of his contributions, and all of those of which he has had the slightest doubt.

During the several years that Dr. Dempster has edited the Journal the cover page has been devoted to a paragraph dealing with some phase of medical practice. Formerly this was written by members of the profession but more recently by the editor himself. The exigencies of the times compel your Committee to recommend the discontinuance of this feature and the utilization of this space for advertising.

Relations with our Publishing House have been most satisfactory. The company has voluntarily offered us a reduction amounting to approximately \$500.00 per year in expense of printing. This, together with a small reduction in the size of the Journal, should make a saving of approximately \$1,000.00.

B. H. VAN LEUVEN
A. S. BRUNK
J. D. BRUCE, *Chairman*.

Upon motion of Neafie-MacMullen, the publication committee report was adopted except that portion relating to finance.

FINANCE COMMITTEE

14. The Finance Committee, through its chairman, Dr. LeFevre, made the following report—

The request for reduction of dues on the part of Wayne and Jackson counties meets with very sympathetic response on the part of your Finance Committee, and your committee recommends that if after discussion a way can be found by which the Council will have authority that a temporary reduction of \$2.50 per year in the dues be made for the year 1932. Your committee recommends the following general budget to govern the expenditures of the Society for the year 1932:

BUDGET 1932

Defense	\$1.00 per member
Journal	\$2.50 per member
Society Expense	\$4.00 per member
Rent and Power.....	\$1,200.00
Annual Meeting.....	1,000.00
P. G. Conferences.....	1,000.00
Committee Expenses.....	1,200.00
Council Expenses.....	1,200.00
Postage	400.00
Joint Committee.....	250.00
Delegates A. M. A.....	500.00
Clerical Expense and Typing.....	2,700.00
Secretary	4,000.00
Editor	2,500.00

After a very full discussion of the finances of the Society and the question of reduction of dues, it was moved by Cook-Heavenrich that the Secretary be directed to give a rebate of \$2.50 per member for every member who paid his 1932 dues and to charge the

same against the contingent fund of the society. Upon motion of Cook-Urmston, the report of the Finance Committee was adopted.

ELECTIONS

15. Elections—Upon motion of Cook-Bruce, Dr. F. C. Warnshuis was continued as secretary.

Upon motion of Bruce-Heavenrich, Dr. J. H. Dempster was elected editor for the ensuing year.

Upon motion of Cook-Heavenrich, Dr. Aaron Verne Wenger was elected treasurer.

Upon motion of Van Leuven-Boys, the question of a special meeting of the Council, to be held in Jackson with the special meeting of the House of Delegates in Jackson on January 27, 1932, be subject to the judgment and call of the Chairman of the Council.

16. Upon motion of Brunk-Carstens, the Council recorded that it was not in agreement as to the annual retainer fee paid to the attorneys for the Medico-legal committee, and that the Council recommend to the Medico-legal committee that the question of paying this retainer and a modification of the attorney fees be referred to the Medico-legal committee, who are requested to confer with their attorney in an endeavor to secure a readjustment of these fees.

17. There being no further business the Council adjourned at 7:30 P. M.

F. C. WARNSHUIS, *Secretary*.

PROCEEDINGS OF THE EXECUTIVE COMMITTEE OF THE COUNCIL OF THE MICHIGAN STATE MEDICAL SOCIETY, HELD AT THE HOTEL STATLER IN DETROIT, MICHIGAN, THE EVENING OF DECEMBER 17, 1931

Committee members present: Corbus, Bruce, Boys, Cook. President Moll, President-elect Robb. Councilors: Carstens and Brook. Guests: Marshall and Whittaker.

Dr. Marshall, chairman of the Committee on the Professional Service Survey, reported the plans and progress of his committee, which was followed by a lengthy discussion.

On motion the Executive Committee approved the plans for the dinner to Regent Smith, and the date, January 14, 1932.

On motion the secretary was instructed to omit the annual meeting of the County Secretaries, and that it be suggested to the Council that each councilor be directed to call a meeting of the county secretaries in his district, during the early part of the year, for the purpose of discussing local and state society problems.

On motion the secretary was instructed to issue a call for the special meeting of the House of Delegates for January 27, 1932, at Jackson, Michigan, the

form of the call to follow closely the original petition for the meeting as presented to and acted upon by the House of Delegates.

On motion the secretary was instructed to call the annual meeting of the Council for Friday, January 8, at 10:30 A. M., at the Hotel Statler, Detroit, Michigan.

On motion the secretary was instructed to call a meeting of the Executive Committee of the Council for 8:30 A. M., Friday, January 8, in Detroit.

There was a discussion on the possibility of further economies which might be instituted in the conduct of the Society during the coming year, which economies will be necessary on account of the increasing number of delinquent members.

F. C. WARNSHUIS, *Secretary*.

COUNTY SOCIETIES

ALPENA COUNTY

At the annual meeting of the Alpena County Medical Society held Dec. 17, 1931, the following officers were elected: Dr. A. R. Miller, president, Harrisville; Dr. F. J. O'Donnell, vice president, Alpena; Dr. W. B. Newton, secretary-treasurer, Alpena; Dr. E. L. Foley, delegate, Alpena; Dr. L. F. Secrist, alternate, Alpena; Dr. W. B. Newton, legal representative, Alpena.

At this meeting, at which Dr. Van Leuven was present, the society passed a resolution endorsing Dr. F. C. Warnshuis as Secretary of the State Society and recommending his continuance in that office.

CALHOUN COUNTY

The following are the officers of the Calhoun County Medical Society for the year 1932: President, Dr. Theodore Kolvoord; vice president, Dr. C. G. Wencke; secretary-treasurer and editor of the Bulletin, Dr. Stanley T. Lowe; delegates to the State Society, Drs. C. S. Gorsline and A. T. Hafford; alternate delegates-at-large, Drs. W. L. Godfrey and A. D. Sharp; councilor, 5th District, Dr. George C. Hafford.

DELTA COUNTY

At the annual meeting of the Delta County Medical Society, held at the St. Francis Hospital, Escanaba, December 15, 1931, the following officers were elected:

President, Dr. L. P. Groos, Escanaba; vice president, Dr. J. J. Walch, Escanaba; secretary-treasurer, Dr. A. J. Carlton, Escanaba; trustee, Dr. G. C. Bartley, Escanaba; medico-legal advisor, Dr. A. S. Kitchen, Escanaba; delegate to the State Society, Dr. John Towey, Powers; alternate, Dr. A. H. Miller, Gladstone.

Following the business meeting a dinner was served by the Sisters of St. Francis.

A. J. CARLTON, *Secretary*.

DICKINSON-IRON COUNTIES

At the recent election of officers of the Dickinson-Iron Counties Medical Society, Dr. E. M. Libby, Iron River, Michigan, was elected president, and Dr. C. P. Drury, Iron Mountain, Michigan, secretary and treasurer.

GRATIOT-ISABELLA-CLARE COUNTY

The December meeting of the Gratiot-Isabella-Clare County Medical Society was held in the

Wright Hotel, Alma, Thursday, December 10. Seventeen members and two visitors had dinner together, and three members came in after dinner.

After dinner was over President Harrigan called the meeting to order. Minutes of the previous meeting were read and approved. The Secretary read his report, which showed we held ten meetings for the year with an average attendance of fifteen members. Three of these meetings were addressed by our own members and seven were addressed by outside physicians. For 1931 twenty-six paid their dues of \$3.00 each, or \$78.00. Expenses for the year were as follows:

Pershing Memorial	\$ 5.00
Flowers to Doctor Bronstetter.....	3.00
Letter Heads.....	3.75
Postage	6.30
Telephone	2.00
Invited guests expenses.....	19.65
Stenographer	10.00
Secretary	25.00

\$74.70

Balance on hand..... \$3.30

At this time President Harrigan called on Chairman Baskerville for report of the nominating committee for officers for 1932, which were as follows:

For President, C. E. Burt, Ithaca.

For Vice President, T. J. Carney, Alma.

For Secretary-Treasurer, E. M. Highfield, Alma.

Motion was made and carried that the report be accepted and the above officers be declared elected for 1932.

Dr. DuBois moved the Secretary write Mrs. Brainerd thanking her for donating Dr. Brainerd's library to the Medical Society. Motion carried.

Dr. R. B. Smith then presented a patient with mitral stenosis and a musical murmur, to which all the members listened.

President Harrigan then introduced Dr. W. B. Cooksey from Detroit, who gave an instructive and illustrated talk on coronary thrombosis. Some of the points made by Dr. Cooksey were as follows: Coronary thrombosis is not mentioned in medical writings until Osler and Dock mentioned it in their writings. It is not commonly seen in a free clinic, or among working people; more common in private practice or among the white-collar class. Cabot, in a report on 4,000 autopsies, found 77 per cent of the heart deaths were of the non-valvular type. A New York physician studied the hospital deaths in New York for one year and 60 per cent of the heart deaths were of the non-valvular type. Pain of coronary thrombosis is not the same as the heart pain of hypertension. Coronary thrombosis is an acute cardiac episode or catastrophe; 50 per cent of cases occur in the hypertensive group. It is due to an arteriosclerosis of the coronary vessels. There appears to be a familial tendency. There is always an atheromatous plaque at the sight of the obstruction. The most common location of the thrombosis is in the left descending coronary. There may be occlusions of smaller vessels. It occurs most frequently between the ages 45 to 60.

The typical symptoms: Severe precordial pain, shock, fear of death, ashen color, rapid feeble pulse, vomiting, muffled heart sounds, fall of blood pressure, basal râles, and leukocytosis and fever after a few hours and pericardial friction sounds.

Atypical symptoms: Very slight or no pain, unusual location of pain, sudden onset of heart failure, pulmonary edema (which is due to the right heart pumping more blood into the lungs than the left can take away), embolic phenomena, coma and anuria, marked arrhythmia, slow full pulse and heart block.

Treatment: Morphine until pain is relieved, complete bed rest and nothing to eat first twenty-four hours, later may give some form of sugar or glu-

cose intravenous, caffeine sodium benzoate, possibly a vasodilator such as metaphillin, administration of oxygen. Possibly abdominal distension may need attention, such as a mild laxative, rectal tube or hot stupes.

After talking over an hour Doctor Cooksey very kindly answered many questions. He said the question of digitalis was in dispute. He thought best not to give digitalis after the third day.

On behalf of the Society, President Harrigan thanked Doctor Cooksey for his very interesting and instructive talk.

Meeting adjourned.

E. M. HIGHFIELD, M.D., *Secretary.*

HOUGHTON COUNTY

The annual meeting and banquet of the Houghton County Medical Society was held Tuesday evening, at the Miscowaubik Club, Calumet, Mich., at 8:30 o'clock. Social session was held at 6:15 P. M.; the banquet at 7:15 P. M., twenty-one members attending; the business session at 8:30 P. M., twenty-four members attending.

The following officers were elected for 1932: President, Dr. W. T. King, Ameek; vice president, Dr. Geo. McL. Waldie, Hancock; secretary-treasurer, Dr. T. P. Wickliffe, Lake Linden; delegate to State Meeting, Dr. W. A. Manthei, Lake Linden; alternate delegate, Dr. Alfred Labine, Houghton; censors, Drs. A. D. Aldrich, Houghton, I. D. Stern, Houghton, and J. R. Kirton, Calumet.

Following a thorough discussion of the activities of different agents and organizations which have been active during the past year in the interest of the public health of our communities, the following resolutions were unanimously adopted:

Whereas, there has been held in Houghton County, free remedial surgical clinic for correction of defect, without consultation with the medical profession as an organized unit:

Whereas, certain agents are at presenting operating in Houghton, Keweenaw, and Baraga Counties, in the interest of public health, and the health of citizens of limited means:

Whereas, these above agents are operating without the full coöperation of the organized medical profession of the counties:

Whereas, the activities of these agents in extending free medical aid to citizens of limited means will undoubtedly sooner or later be abused by certain types of citizens, and the agents will be in active competition with the physicians of the counties:

Whereas, the members of the Houghton County Medical Society of Houghton, Keweenaw, and Baraga Counties, feel capable of taking care of their friends, neighbors and fellow citizens, in good times as well as bad times (as the past activities of the medical profession are *mute evidence* of this fact):

Whereas, the medical profession always welcomes the aid and help of any agent or organization which proposes to help better the health of our community, and assures them our full coöperation:

Therefore, Be it Resolved by the Houghton County Medical Society that any agent or organization operating in Houghton, Keweenaw, or Baraga Counties in the interest of the public health of our citizens, and expecting the coöperation of our profession, *must* have their relation to the physicians of these counties established through the regular organized representative of our profession, namely—the Houghton County Medical Society:

Be it further Resolved that the President of the Houghton County Medical Society appoint appropriate committees to represent the Houghton County Medical Society in its relation with the public:

Be it further Resolved, that no member of the

Houghton County Medical Society will associate himself with any agent or organization sponsoring free clinics, *except* through the Houghton County Medical Society:

Be it further Resolved, that due to the present unusual depression and unemployed situation, and the rapidly increasing amount of free services demanded of the medical profession, the president of the Houghton County Medical Society shall appoint proper committees to enter into negotiation with the Supervisors of Houghton, Keweenaw, and Baraga Counties, with the purpose of taking care of this work through the Houghton County Medical Society:

Be it further Resolved, that any fees accruing from this indigent work for counties be paid directly to the Houghton County Medical Society, the final dispositions of the funds left to the action of the Medical Society.

Be it further Resolved, in order that we have unanimous support, and united action by every member of Houghton County Medical Society, that any member of Houghton County Medical Society, who knowingly violates the above resolutions, shall be cited to the Board of Censors, and if found guilty, his offense shall be deemed sufficient cause for his expulsion from the Houghton County Medical Society.

Moved, passed and adopted this fifth day of January, 1932, Calumet, Michigan.

T. P. WICKLIFFE, *Secretary*.

JACKSON COUNTY

The members of the Jackson County Medical Society met at the W. A. Foote Memorial Hospital on the afternoon of December 15 for their regular monthly business meeting.

The minutes of the previous meeting were approved as printed in the Bulletin.

Dr. Clarke, chairman of the Health Education Committee, talked on the subject of toxin-antitoxin administration. He stressed the importance of the individual physician in this work. There has been no toxin-antitoxin administered in the schools since last June and it is now necessary for each physician to take an active part in this work and urge the parents with whom he comes into contact to have their children immunized early in life. Dr. Dengler suggested that the Society might have cards printed which could be hung up in the doctors' waiting rooms calling attention to the need of early immunization. After some discussion he made this as a motion, which was seconded by Dr. Faust. The motion carried. Dr. Van Schoick moved that the Health Department of Jackson be asked to cooperate with the Medical Society by sending notes to the families having children not immunized and to check up on those not responding after a reasonable time to learn why they had not been done, and that if it was due to lack of means then the family physician should do it free. Dr. Ludwick seconded the motion. In the discussion which followed Dr. Bullen, the city school physician, said that because of the reduction of the amount of help in the Health Department he did not know whether this could be done, but stated they were willing to cooperate. Motion carried.

Dr. Smith reported that the agreement between the County Board of Supervisors and the Jackson County Medical Society for the care of the county indigent patients was working out as satisfactorily as could be expected. He pointed out that at the outset there was likely to be some misunderstanding in regard to the bills. He urged the physicians to consult the fee schedule carefully in itemizing their

statements. At the present time funds are not available for their payment, but it was expected that they would be taken care of early in January.

The members were urged by Dr. Riley to send in a bill of two dollars to insurance companies when filling out sick and accident reports.

The Society then proceeded to the election of officers for the coming year. Dr. M. N. Stewart was elected president. Dr. Stewart stated that he appreciated the honor bestowed upon him but because of ill health he felt that he could not perform the duties of president and asked that the Society accept his resignation. Dr. Van Schoick moved that his resignation be accepted. Motion carried. Dr. C. E. DeMay was then elected President; Dr. W. L. Finton, Vice-President; Dr. R. H. Alter, Secretary; Dr. F. G. Ransom, Treasurer. The directors elected were Dr. Charles Dangler, Dr. H. A. Brown and Dr. Ferdinand Cox; delegates, Dr. Philip Riley and Dr. J. J. O'Meara; alternate delegates, Dr. C. S. Clark and Dr. H. A. Brown.

After the election of officers the members adjourned to the Hayes Hotel, where a turkey dinner was enjoyed by the members and their wives. They were then addressed by Mr. Harold Steele, superintendent of Jackson public schools, on the "Modern Trend of Education." The new officers were then installed and the remainder of the evening was spent in the ballroom.

KALAMAZOO ACADEMY OF MEDICINE

The annual meeting of the Academy was called to order at 1:30 on December 15, 1931, in the Academy rooms, by the president, Dr. Sherman Gregg.

A vote by ballot for president was the first order of business. Drs. Boys and Cook moved that if a majority was not voted on the first ballot, a second vote should be taken on the three highest. Carried. Drs. Shackleton and A. H. Rockwell moved that a unanimous vote be recorded for Dr. Morter as president of the Academy for the ensuing year. Carried.

Drs. Fulkerson and S. E. Andrews were appointed as further members to act temporarily on the Board of Censors for applications for membership.

Inaugural remarks of appreciation were made by Dr. Morter, who then accepted the chair.

The minutes of the previous meeting as printed in the Bulletin were approved.

Correspondence was read.

The report of the nominating committee follows:

The Nominating committee of the Kalamazoo Academy of Medicine respectfully submit the following names for officers of the Society during the ensuing year:

President, R. A. Morter; first vice-president, W. R. Vaughn; second vice president, A. A. McNabb; third vice president, L. W. Gerstner; treasurer, Hugo Aach; librarian, Clara Unrath; board of censors, Sherman Gregg and L. H. Stewart; delegates to State Society, F. T. Andrews and A. A. McNabb; alternates to State Society, D. C. Rockwell and J. T. Itzen.

Signed,

C. B. Fulkerson

L. H. Stewart

W. E. Shackleton.

Drs. Shackleton and Fulkerson moved that the report be accepted and unanimous ballot be cast for the officers named. Carried.

Dr. McNair, believing that the Academy should honor its older members, moved that a letter be sent as a gesture of kindness to Dr. Orlo B. Ranney,

now eighty-four years old and the oldest living charter member of the Academy, notifying him of his election as an honorary member of the Academy with all its privileges. Seconded by Dr. Shackleton. Carried.

Dr. Collins, reporting for the membership committee, stated that there were 118 members at the beginning of the year 1931. Three members died and two moved away during the year. As of January 1 there are 123 active members and one honorary member.

Dr. R. G. Cook read a portion of the State Criminal Code relating to reporting of deaths to the coroner. Discussion by Drs. Boys and Crum. Drs. F. T. Andrews and S. E. Andrews moved that the report be printed in the bulletin. Carried. The report follows:

"Sec. 19. It shall be the duty of any physician and of any person in charge of any hospital or institution, or of any person who shall have first knowledge of the death of any person who shall have died suddenly, accidentally, violently or as the result of any suspicious circumstances or without medical assistance up to and including at least thirty-six hours prior to the hour of death, or in any case of death due to what is commonly known as an abortion, whether self-inflicted or otherwise, to immediately notify the coroner of the death. It shall be unlawful for any undertaker, embalmer or other person to remove the body from the place such death occurred, or to prepare same for burial or shipment, without first notifying the coroner and receiving permission to remove the body."

Dr. Sherman Gregg gave his exaugural address on "Recent Developments in the Diagnosis and Treatment of Poliomyelitis."

MARQUETTE-ALGER COUNTY

The annual meeting of the Marquette-Alger County Medical Society was held in Marquette, January 12, 1932.

The following officers were elected for the ensuing year:

President, Dr. N. J. Robbins, Negaunee; vice president, Dr. T. R. Laughbaum, Marquette; secretary-treasurer, Dr. D. P. Hornbogen, Marquette; delegate to Michigan State Society meeting, Dr. V. H. Vandevanter, Ishpeming; alternate delegate, Dr. L. W. Howe, Marquette.

Following the election of officers Dr. R. Grant Janes presented a very interesting and instructive paper on "Pituitary Hormones and their Relation to the Ovaries."

D. P. HORBOKEN, *Secretary*.

NORTHERN MICHIGAN

The December meeting of the Northern Michigan Medical Society was held at the Perry Hotel, Petoskey, December 10, 1931, with a 100 per cent membership attendance plus several guests.

Following an excellent turkey dinner, the formal business of the society was done away with for the evening and the program arranged for immediately taken up.

The first speaker was Mr. Moore of the General Electric Company, who showed a number of slides depicting the various discoveries made by routine X-rays. He urged the more general use of X-ray in routine examination.

The next speaker was Dr. John Hodgen of Grand Rapids, who gave an extremely practical talk on the treatment of Colles' fractures.

Dr. Hodgen's talk was followed by a series of X-ray films shown by Dr. Menees. These films il-

lustrated the various types of fractures and were commented on by Dr. Hodgen.

Following the talks a general discussion was held by the members and the visiting men.

The January meeting of the Northern Michigan Medical Society was held January 14, 1932, at the Perry Hotel, Petoskey. Eighteen members attended this first meeting of the new year and a very successful meeting was held. The entire meeting was devoted to business.

The applications of Drs. Harrington, Harbor Springs; Conway, Petoskey; and Witters, Charlevoix, were read. On motion it was voted to suspend the rules and grant these men membership.

A membership committee was appointed consisting of Drs. Mast, Frank and Mayne.

A motion was made and carried that the delegate to the state meeting be paid travelling expenses by our local society.

A report on the January Council meeting was given by Dr. Van Leuven.

A Program Committee consisting of Drs. Frank, Van Leuven and Brenner was appointed to arrange the program for the February meeting.

A vote of thanks was given Drs. Mast and Duffie for their splendid work as president and secretary for the past year.

Dr. Mayne of Cheboygan was appointed a committee of one to act as Medico-legal Advisor.

Dr. Staley of Rogers City (Couzens Fund) then made a short talk. The meeting was presided over by the new president, Dr. William Stringham of Cheboygan.

ERVIN J. BRENNER, *Secretary*.

OAKLAND COUNTY

The election of Dr. Chas. A. Neafie, Director of Public Health, City of Pontiac, has brought into the executive chair the member best informed in events of the society. This election so makes the Councillor from this district the county president. In addition, the new incumbent unofficially serves the society as its historian.

After a residence in Oakland County of three years, Dr. Neafie joined the society in the December, 1915, meeting in a class with Drs. Foley, Knapp and Mercer. He was first inducted into office in 1919, when he served one year as secretary-treasurer. At the expiration of his term from his suggestion this position was divided into two offices.

From 1927 continuously until 1930, Dr. Neafie occupied the secretaryship. It was during this period that the society's bulletin, which had appeared in 1912 under Dr. Jos. B. Chapman for a few issues, was republished as a mimeograph folder. After two years it was brought to its present pamphlet, printed form, self sustaining from advertising. In 1931 he was elected to serve as councillor, 15th District, in the Michigan State Medical Society, for a term of four years.

Besides association in the American Medical affiliates, Dr. Neafie is a member of the several public health societies culminating in the International Association of Medical Health Officers, two of which he has served as president. As a vocation he is gathering from all available records and from interviews with oldest residents historical material by decades of the approximately 1,000 medical men who have practiced in the county since its first settlement in 1817.

One of Dr. Neafie's noteworthy contributions to the society was a series of historical sketches of these pioneer medical men appearing in the local press several months ago. These notes not only engendered much interest and public good will, but

number among the few articles so appearing to acquaint the thousands of Oakland's newcomers with the flux of romance of the county's early days, so necessary for welding a heterogeneous citizenry into a community.

Most significant to Dr. Neafie of the changes occurring in the society has been the increase in cordial relations between members. So discordant was the society in the nineties that for a period of ten years no president was elected, neither faction being willing for such honor to be placed elsewhere. In the sixteen years of Dr. Neafie's experiences this feeling gradually has given place to one of harmony and united purpose. Paralleling this has been an increase in scientific interest. Scientific meetings have increased from two to ten yearly, in addition to three or four social seasons. Numerically during this period the society has more than trebled.

The practitioner of the future, Dr. Neafie believes, will find increasing emphasis resting upon preventive medicine in the broadest sense. Before the society's immediate attention is the matter of medical care during the current unfortunate period for the truly indigent, which Dr. Neafie shows the society has never failed fittingly to meet. With interest is awaited by the Council of the State Society the report of the special committee to investigate activities of agencies administering to the public health, inaugurated at the last state meeting.

A meeting of the Board of Directors was held December 11, 1931, 12:15 P. M., at the Heldenbrand Hotel.

Present were Farnham, Gerls, Murtha, Mercer, R. Baker, Hoyt, Monroe.

Motion made, seconded, carried that Hoyt and R. Baker be appointed to audit the accounts of the Treasurer, as is the law of the Society, before the next annual meeting.

The Secretary was instructed to send to the Secretary of the State Society a copy of Clarence Smith's letter written to Dr. Corbit. This letter relates to the questions of chiropractors and osteopaths practicing preventive medicine.

Dr. R. Baker moved that Dr. Carr's application for membership be announced in the Bulletin for January, and to be considered by the Society at the January meeting.

Dr. Gerls moved that we suggest to the Poor Commission that they communicate with the various factories in Pontiac and carry to them the following idea: That when men are invited to return to work, this be done, not by letter, but by personal interview. This is suggested because of a number of cases in which families have gone back to their former homes, awaiting summons by the factory to return to work. The summons comes by mail in many cases addressed to the residence of a friend, who in turn forwards notice to the worker, who has temporarily gone back to his home state with his family. If the interview should be personal, these men would not be called back to Oakland County, but other unemployed men, already here, would be put to work. Seconded by Dr. Neafie. Carried.

Dr. Wagley moved that Neafie, R. Baker, and Hoyt be appointed to meet with H. M. Pryale in regard to the care and collection of fees when Wayne County cases are cared for. Seconded by Dr. Gerls. Carried.

The Secretary was instructed to send F. T. Reid a list of Oakland County members in his vicinity and have them each write a letter to the Secretary expressing their views of the application of Dr. Carr for membership in our Society.

Dr. Neafie moved that Warnshuis' letter relating to osteopathy be turned over to Dr. Furlong, Chair-

man of the Medico-legal Committee. Seconded by Dr. Gerls. Carried.

Dr. Wagley moved that the Secretary furnish uniform minute books to the Chairman of each Standing Committee. Seconded by Dr. Neafie. Carried.

Dr. Neafie moved that Dr. Mooney be notified that he is on the suspended list. Seconded by Dr. Wagley. Carried.

Dr. Wagley was instructed to communicate with Dr. Sheffield, Chairman of the Program Committee, in regard to a combined meeting with the Pontiac State Hospital, to celebrate the 50th anniversary of Dr. Christian's connection with the Pontiac State Hospital.

Dr. Wagley moved that we recommend to the Society that Dr. Shaw of Birmingham be made an honor member of the Society, and that his past dues be cancelled. Seconded by Dr. Gerls. Carried.

Dr. Wagley moved that the question of the status of Drs. Alexander and Lossee be referred to the Membership Committee, Dr. Mitchell, Chairman. Seconded by Dr. Gerls. Carried.

Dr. Hoyt moved that the Treasurer be instructed to obtain a statement of intention from the remaining delinquent members. Seconded by Dr. Gerls. Carried.

ONTONAGON COUNTY

At the annual meeting of the Ontonagon County Medical Society, held at this place January 4, the following officers were elected for the ensuing year:

President, C. F. Whiteshield, Trout Creek; Vice President, H. P. Blake, Bergland; Secretary, E. J. Evans, Ontonagon.

E. J. EVANS, *Secretary*.

SAGINAW COUNTY

The election of officers for 1932 at a meeting of the Saginaw County Medical Society, held December 15, 1931, resulted as follows: Rockwell M. Kempton, M.D., president; Frederick J. Cady, M.D., vice president; W. K. Anderson, M.B., secretary-treasurer; William J. O'Reilly, M.D., medico-legal advisor.

The Board of Censors is composed of the following: H. J. Meycr, M.D.; P. S. Windham, M.D.; E. E. Curtis, M.D.

W. K. ANDERSON, *Secretary*.

SAINT CLAIR COUNTY

The annual meeting of Saint Clair County Medical Society was held at Port Huron, Michigan, on Tuesday, December 15, 1931.

Twenty-eight members and four guests were present. After a very enjoyable dinner and social hour the meeting was called to order by President J. E. Wellman. The business of the evening was the election of officers for the year 1932.

The following officers were elected: President, Dr. D. W. Patterson; vice president, D. J. F. Waltz of Capac; secretary-treasurer, Dr. George M. Kesl; delegate to the State Society, Dr. A. L. Callery; alternate delegate to the State Society, Dr. T. E. De Gurse of Marine City.

Adjourned without further business after a short address by the newly elected President, Dr. D. W. Patterson.

A regular meeting of Saint Clair County Medical Society was held at Port Huron, Michigan, on Tuesday, January 5, 1932.

Eighteen members were present. After a most enjoyable dinner and social hour the meeting was called to order by President D. W. Patterson who

introduced the speaker of the evening, Dr. Alex. J. MacKenzie of Port Huron, Michigan. Dr. MacKenzie gave a most interesting talk on his personal observations in diagnosis and treatment of diseases of the prostate gland. Those present found the subject as presented by Dr. MacKenzie very interesting and full of practical points. The speaker stressed the two-step operative treatment, pointing out the importance of a thorough decompression of the bladder followed by an interval of time sufficiently long to allow the patient to return to normal before attempting the second part of the operative treatment. Dr. MacKenzie stated that if this plan was followed and the patient allowed to come back to normal before the removal of the gland that the mortality was very low, at least it had become so in his own experience. In conclusion Dr. MacKenzie demonstrated a feature in the treatment of a simple fracture of the lower jaw by the use of a wire splint which avoided fixation of the lower to the upper jaw and increased the comfort of the patient during the period of treatment. Both subjects brought forth friendly discussion by many of the members present, after which the speaker of the evening closed the program in the usual manner.

Before adjournment the following resolutions were adopted without debate:

Resolved that the local dues of the society be reduced from six dollars to four dollars a year.

Resolved that the society pay the expenses of our delegate to the meeting soon to be held at Jackson provided same are not otherwise paid.

Resolved that the report of the auditing committee covering the records of the society for the year of 1931 be accepted and placed on file.

—GEORGE M. KESL,
Secretary-Treasurer.

WOMAN'S AUXILIARY, MICHIGAN STATE MEDICAL SOCIETY

MRS. J. EARL McINTYRE, President, Lansing
MRS. W. E. McNAMARA, Secretary, Lansing

A MESSAGE FROM THE NATIONAL PRESIDENT

Dear Auxiliary Members:

As we cross the threshold of a new year shall we, like other businesses, pause and take stock of ourselves to see where we have arrived in relation to the goal which we set for ourselves at our annual meetings?

Is there yet a county or a state auxiliary that is not working under the direction of an advisory council or counselor of doctors appointed by its medical society? A questionnaire sent last summer to our thirty-seven constituent state units to ascertain if they had advisory councils appointed by their medical associations brought replies from thirty and revealed that twenty-eight of those did have an advisory council. One of our goals for this year is an advisory council or counselor for each of our county and state auxiliaries. Where does your own auxiliary stand with relation to this goal? It is hoped that each state president reporting at New Orleans will be able to say that not only her state auxiliary but that each of its constituent county units has an advisory council or counselor.

Have you as a county or state group set a goal for membership? Has your auxiliary some sort of membership file by which you have kept a complete record of members from the beginning of your organization and are you retaining as members all

those who have ever belonged? If not, could you not begin this first month in the new year to re-enlist them? Our national files contain many cards of members which we have had to class as "delinquents" because we have failed to receive dues for them or reports on them. Some of these have moved to other states, others have passed into the Great Beyond, still others have just failed to pay dues. Could not each organized county that has not already done so, yet this year make an effort to re-enlist very eligible woman who has ever been a member, make a card file of its membership and report to the state office the names of those who have moved to another locality and to a chairman, which each state president is being asked to appoint for that purpose, the names of those who have passed on.

It seems to me that each county administration should feel that it had failed somehow in its duty if it did not make a sincere, persistent and tactful effort to hold in membership at least all those committed into its care by the former administration and unless its membership is already one hundred per cent of the wives of doctors belonging to the county medical society, it should attempt to make a definite, even though slight, gain.

The president of an Auxiliary in one of the sparsely settled western states, where great distances and mountainous country make frequent meetings impossible, wrote that she had received much inspirational material from the various national chairmen this year, but that, as yet, her Auxiliary is only a social organization, whose primary purpose is to stimulate its members to attend annual meetings so that the attendance of the doctors themselves may be increased. This is a laudable goal. This Auxiliary is already a "reserve force" for its medical society. When the doctors in that state medical society find out how those in the neighboring state societies are using their Auxiliaries to promote understanding between the medical profession and the public, perhaps they, too, may desire to use their "reserve force" for further service, and the Auxiliary in the meantime may be reviewing the work of other Auxiliaries as reported in the state Journals, the Bulletin, the Minutes and Reports of the Convention, and preparing itself for service when called upon.

Some of the newly-organized Auxiliaries are attempting nothing more than to bring about unity and solidarity within the profession by means of social contacts between the families of doctors. My observations on my visits to Auxiliaries during this year leads me to believe that this function of the Auxiliary should not be underestimated. The medical societies are apparently, more and more, recognizing the forces both within and without the profession that are working counter to the best interests of the profession and the public and are feeling the need of a *unifying* force such as an Auxiliary may be when given sufficient encouragement and co-operation, and guidance by its medical society.

Recently an outstanding doctor in a county society which has no Auxiliary, objected to the organization of one because he said the Auxiliary is merely duplicating the work of other women's organizations. He gave as an example the various types of philanthropic work done by our units. This doctor had lost sight of two important factors in connection with the philanthropic projects of most of the Auxiliaries. First, the philanthropic work done by the Auxiliary usually is related closely to the work of the medical professions, for example: participation in Christmas seal sales of the tuberculosis societies; various types of work for hospitals, sanatoriums and preventorium; scholarship loan funds for medical students and students of nursing; contributions to

the Medical Benevolence Fund by the Pennsylvania Auxiliary; contributions to memorials established or approved by medical societies. Because of the humanitarian and almost universal appeal to women of philanthropic work it will serve as a bond to hold them together while they establish unity and good fellowship within their group and while some to whom the educational and legislative programs make a strong appeal work under the guidance of their advisors on these programs within their own and other women's groups. Has your Auxiliary a philanthropic goal for this year? Might it increase interest if you had such a goal?

The growing interest in the educational and public relations programs of the Auxiliaries this year has been most gratifying. That many state medical societies have prepared educational programs for their Auxiliaries and have endorsed the National Auxiliary study envelopes for use in developing these programs is satisfying. In an increasing number of county Auxiliaries a few women are being discovered who are vitally interested in the educational programs and who are a real force in interpreting the ideals and work of the medical profession to other women's groups in which they work by influencing these groups in the choice of approved literature and speakers to be used on their health programs. One of our goals this year is to discover such women, to urge them to represent our groups in other women's organizations by accepting positions of leadership therein, and to back them up by our loyal support. Are there such women in your group working, or capable of working, under supervision of your advisory council in other women's organizations?

The state Auxiliaries have made much progress this year in securing chairmen corresponding to the national chairmen. Our organizations cannot function properly until county Auxiliaries also have such chairmen who will receive program suggestions and materials from the state chairmen and who will report to the state chairmen on the progress of the county work. The function of the National Auxiliary is to stimulate interest in types of approved work possible to be done and to serve as a clearing house for information on the kinds of work being done successfully by the various Auxiliaries. It is obvious that little interest can be stimulated if there are not county and state chairmen corresponding to the national. How near to this goal is your Auxiliary?

During the year between annual meetings our Press and Publicity Committee reporting to the state Journals and through the Bulletin of the A. M. A. is our clearing house for information and news. Has your state contributed its share of news to the state and national chairmen? Our national Press and Publicity Chairman has been very diligent in collecting news and prompt in reporting, but many of our state chairmen have never reported to her. My dear state presidents, are you positive that your chairman is reporting? Isn't one of your goals to let the rest of the Auxiliary world know what fine work your state is doing so that others may profit by your example? If your Press and Publicity chairman is not functioning, will not you consider it your privilege as well as duty to send a report of your work to Mrs. Overholser immediately! Is she receiving the Journal of your state medical society? Is Mrs. Walter J. Freeman, the editor of the Bulletin, receiving it?

A most interesting and inspiring development in Auxiliary work that was revealed by some of the states reporting at the mid-year board meeting in Chicago is that several of the state Auxiliaries now have a portion of the time of an assistant-executive

secretary appointed by their respective medical societies. Minnesota, Illinois and Wisconsin reported such coöperation. Is that kind of relationship between a State Medical Association and its Auxiliary not a goal for which to hope?

The National Auxiliary does not presume to dictate, it desires only to collect and exchange plans to advise and to stimulate state presidents and their chairmen. The annual conventions and mid-year board meetings are our greatest factors in stimulating interest. It is in these meetings that the values of the Auxiliary become apparent; it is here where, by reports, by conferences and discussions, we measure our progress, evaluate our methods and discover our mistakes; it is here that we discover our strength and our weakness, it is here that we set our goals.

We believe that the national mid-year board meetings and conventions are so important in the life of the Auxiliary that every board member should consider it an obligation when reasonably feasible to attend. We are suggesting that each state Auxiliary set this new goal for itself at its next annual meeting if possible, that it provide sufficient means to insure its state president's attendance at the mid-year board meeting in Chicago, and at the annual Convention in the spring. We believe that every state chairman should make an honest effort to attend the national convention.

Mrs. Joseph Hume of New Orleans is the chairman of the next convention which is to be held next May 9-13 in that interesting old city of the South, New Orleans. Our own President-Elect, Mrs. Walter Jackson Freeman, who so skillfully guided the Convention in Philadelphia, is also a member of the New Orleans Convention Committee.

There we shall find both pleasure and inspiration. May I hope to meet you there, one and all? May we have the satisfaction of reporting that we have reached all goals set for the current year? There are yet three more working months in which to accomplish them.

And won't you all be considering the goals we should set for next year?

Faithfully yours,
(MRS. ARTHUR B.) ANNA F. MCGLOTHLIN
President, Woman's Auxiliary,
American Medical Association.

MICHIGAN STATE MEDICAL SOCIETY AUXILIARY

The Executive Board of the Woman's Auxiliary to the Michigan State Medical Society met in Detroit at the Woman's City Club, Tuesday, January 12, 1932, at noon. The subject of dues to be paid by the county auxiliaries to the State was discussed thoroughly and as an emergency measure the Board voted to decrease the dues to fifty cents per member for the current year. It is felt that this will help the county auxiliaries to carry on their welfare work which is so imperative at this time.

Those attending were Mrs. J. Earl McIntyre, president; Mrs. F. A. Mercer, vice president; Mrs. W. E. McNamara, secretary-treasurer; Mrs. Herbert Hertsch, Hygeia chairman, and Mrs. Guy L. Kiefer, state organizer.

WAYNE COUNTY AUXILIARY

The regular monthly meeting was held in the Nurses Home of the Highland Park General Hospital on Tuesday, January 12, at 2 P. M. Mr. Thaddeus Wronski, manager of the Detroit Civic Opera, was the speaker. Mrs. Earl McIntyre, president of the Woman's Auxiliary to the Michigan State Medical Society, Mrs. Guy L. Kiefer, state organizer,

and Mrs. W. E. McNamara, secretary, all of Lansing, Michigan, were guests of honor.

Following the meeting those assembled were guests of the Highland Park Physicians Club at tea. Dr. E. E. Poos, president, gave an address of welcome, and wives of the members officiated as hostesses. About 75 members and friends enjoyed the hospitality of the club.

Mrs. Elmer L. Witney, of Detroit, past president of the Auxiliary, has been appointed sectional chairman of the Public Relations Committee in the Northwest and Central regions, of the Woman's Auxiliary to the American Medical Association. Mrs. Witney served on the National Board as chairman of the Legislative Committee last year.

THE DOCTOR'S LIBRARY

THE SURGICAL CLINICS OF NORTH AMERICA.

(Issued serially, one number every other month.) Volume 11, No. 6 (Philadelphia Number—December, 1931.) 309 pages with 87 illustrations. Per Clinic Year (February, 1931, to December, 1931.) Paper, \$12.00; cloth, \$16.00 net. Philadelphia and London, W. B. Saunders Company, 1931.

CONQUERING ARTHRITIS. By H. M. Margolis, M.D., New York, The Macmillan Company, 1931.

This is a work written for the arthritic patient. It is not, however, a guide for self-treatment. It rather discusses the problems which beset him. It deals with the history of the disease, outlines the general problem of the rheumatic patient and describes the various forms of chronic arthritis. Other subjects dealt with are Sources of Infection; The Structure of Bones and Joints; The Life Cycle and Course of Infectious Arthritis; Arthritis Confined to the Spine; and Rheumatic Fever. It is a book which will be found helpful to the general reader.

HISTORY OF MEDICINE IN THE UNITED STATES.

By Francis R. Packard, M.D., Editor of the *Annals of Medical History*. 103 illustrations; 2 vols., pages, 1,323. Paul B. Hoeber, Inc., New York, 1931. Price, \$12.00.

This splendid work has been long anticipated. Dr. Packard brought out a single volume work on the same subject in 1901. Those of us who have been more or less familiar with the first edition have felt that after three decades the time is more than ripe for a second. However, now that we have it, it cannot be commended too highly. Perhaps there is no other person in the United States better qualified to write such a work than the author. He brings to the task a ripened historical judgment refined by the editorship of what is perhaps the finest Journal in the world devoted to the history of medicine, namely the *Annals of Medical History*.

We would all agree with him that a History of Medicine in the United States is of necessity an account of the development of institutions and a description of the lives of men who have influenced the medical thought and practice of this day.

The work is encyclopedic in its embodiment of American medical history. The history of medicine in this country is intimately associated with the history of the country itself. Among the subjects dealt with are the following: Medical Events Connected with the Early History of the English Colonies in America; Epidemic Sickness and Mortality in the English Colonies in North America from its Earliest Discovery to the year 1800; Early Medical Legislation; The Earliest Hospitals; Medical Education before the Foundation of Medical Schools;

The Earliest Medical Schools; Pre-Revolutionary Medical Publications; The Medical Profession in the War for Independence; The Medical Department of the Army from the Close of the Revolution to the Close of the Spanish-American War; History of the Medical Department of the U. S. Navy; Some of the Medical Schools Founded by the First Half of the Nineteenth Century; Outlines of the Development of Medical Practice and Education in Some of the States; Foreign Influences on American Medicine; Some Notable Events in American Medicine and Surgery; and The Beginnings of Specialism in America.

There is a lengthy but interesting chapter dealing with the outlines of the development of medical practice and education in some of the States. Readers of this Journal will be interested in Dr. Packard's treatment of both medical education and medicine in the State of Michigan.

The author devotes ten pages to this State in which he commends the Medical History of Michigan, gotten out by the Michigan State Medical Society in 1930, which he describes as "a large work" containing "minute details on the history of every phase of the subject."

Every American physician will desire to read this book. No other work of which we have any knowledge gives so complete an account of the evolution of American medicine from colonial times to the opening of the present century. The author is to be congratulated on the publication of this, which may be called his *magnum opus*.

IMHOTEP TO HARVEY. BACKGROUND OF MEDICAL HISTORY.

By C. N. B. Camac, M.D., Assistant Professor of Clinical Medicine, College of Physicians and Surgeons, Columbia University, New York. Foreword by Henry Fairfield Osborn, Sc.D., LL.D. Price, \$3.75. Paul B. Hoeber, New York, 1931.

Within recent years, books on medical history, or some phase of the subject, have appeared fairly frequently. Undoubtedly they meet a certain demand, which is a healthy sign. Chairs of medical history have been established in many medical colleges. The subject is one which is not likely to be soon exhausted. The present work dealing with the Backgrounds of Medical History is, in a sense, unique. It is the outgrowth of informal conferences of the author with groups of fourth year medical students. It is an outline, but a very suggestive one, with its tables which enable the reader to obtain a true view of medical history in perspective, and its lists of reference books classified according to the different periods or epochs. These works are designed for the English reader inasmuch as those included from the French or German are limited to works available in English translations. The author's presentation of the subject is of extraordinary interest from his first chapter, in which he discusses the Evolution of Inquiry, to end where he deals with the virile seventeenth century. If the reviewer were to make a choice of these interesting chapters it would be the fourth, in which the author describes the middle ages, which he calls the period of retrogression for science. Seldom have we had this long fallow epoch handled so graphically. Those on the pre-Renaissance and Renaissance periods are particularly fascinating. The author, in his discussion of "backgrounds," makes real and vivid the atmosphere in which the makers of medicine and, indeed, science in general worked often with much discouragement and in the shadow of persecution. After two whole evenings with this book we are tempted to use the superlative degree. The format and art of book-making are in keeping with the other excellent books of this series which it has been a pleasure to commend from time to time.

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CONTENTS

Specialism: Its Ideals and Standards. J. M. Robb, M.D.	173	Editorial:	
Transurethral Prostatic Resection: A Recent Development in Genito-Urinary Surgery: A Preliminary Report. Reed M. Nesbit, M.D.	176	Courts and Doctors.....	215
Sociological Aspects of Contraception. Harrison Smith Collisi, M.D., F.A.C.S.	178	Roentgenology as a Specialty.....	216
Gall Bladder Surgery in the Aged. Walter L. Hackett, M.D., F.A.C.S.	182	The Value of Education.....	217
Bone Grafting: Some Fundamental Principles. Vernon L. Hart, M.D.	184	Moist Not Wet.....	218
Appendicitis Under Two Years. Rockwell M. Kempton, M.D.	188	Birth Control.....	218
The Rehabilitation of Patients with Infantile Paralysis. Norman Capener, F.R.C.S.	191	A Bit of Medical History.....	219
Sodium Amytal in the Treatment of Toxemia of Pregnancy. Robert Kennedy, M.B., F.A.C.S.	197	Obituary.....	222
Renal Tuberculosis with Anuria Due to Calculus Disease. George Sewell, M.D.	199	General News and Announcements.....	222
Dr. Richard R. Smith Honored.....	201	Medical Economics:	
Famous Men in Medical History: John Shaw Billings. Henry J. Faul.	204	Can We Afford State Medicine? Part I. J. G. R. Manwaring, M.D.	224
Michigan's Department of Health. C. C. Slemmons, Dr.P.H., M.D.	212	The Value of Periodic Medical Examinations. Bruce C. Lockwood, M.D.	225
		Communications.....	227
		Society Activity.....	228
		Proceedings Special Meeting of the House of Delegates Michigan State Medical Society.....	231
		County Societies.....	236
		Woman's Auxiliary.....	240
		The Doctor's Library.....	242

SPECIALISM: ITS IDEALS AND STANDARDS*

J. M. ROBB, M.D.†

DETROIT, MICHIGAN

It is hardly possible to present the ideals of specialism without reviewing its growth. Growth and ideals suggest being. And the process of human development lends itself well to the treatment of this subject. Therefore, let us consider its birth or origin, infancy and childhood, adolescence and maturity.

The birth of specialism, as well as of medicine itself, is a moot question and probably always will be. A modern writer has aptly said: "There was unemployment in the Garden of Eden. Satan began selling apples. Eve, womanlike, went off her diet; ate one." And I have added, with gratitude, instead of keeping the doctor away, that apple was the beginning of his service.

The faltering early life of specialism has been termed by some "pseudo-specialism." At the time of Hippocrates there were no specialists, or at least none who received any sort of official recognition from the general body of physicians; and yet even then there were a few practitioners who devoted

themselves preferably to the treatment of certain maladies, like the affections of the eye and of the teeth. Besides these there were, undoubtedly, in the larger communities, men who were ready and competent to undertake the more serious surgical operations. But even these men, as appears from the language of the so-called Hippocratic Oath, could not honorably perform an operation for stone in the bladder; this particular work having been left from time immemorial entirely in the hands of the lithotomists, a class of men who performed no

*Presented at the complimentary dinner tendered Regent Dr. Richard E. Smith at Grand Rapids, January 14, 1932.

†Dr. Robb is president-elect of the Michigan State Medical Society.

other kind of surgery and who, in fact, were considered outside the pale of the medical profession, merely surgical artisans.

During the Alexandrine period the attitude of the best physicians with reference to specialization in medical practice evidently underwent a change—not a very marked one it is true, but yet sufficient in degree to attract some attention. A certain Demetrius of Apamea, a follower of Herophilus, was considered at this time an expert in obstetrics, and toward the end of the first century, B. C., Alexander Philolethis, a disciple of Herophilus, acquired celebrity as a gynecologist. Two physicians, Gaius of Naples and Demosthenus of Marseilles, were noted for their skill in treatment of diseases of the eye. Demosthenus of Marseilles wrote a treatise on ophthalmology that was popular down to the Middle Ages. The first account we have then of specialism is connected with the work of the Alexandrine School, when specialism had become an accepted fact. The first specialists were obstetricians, gynecologists and ophthalmologists.

In Rome the half-educated and untrained man became a specialist, since he could pass with a superficial knowledge of a particular disease or a certain region of the body. The highest class of specialist in ancient Rome consisted of the *ocularii*, the eye specialists. Some were men of esteem, but the majority were peddlers of eye salves and lotions.

"Oculist once, you now enjoy
A gladiator's fame;
Yet unchanged methods you employ
And kill men just the same."

Galen thought so little of these *ocularii* that he considered it useless to write of diseases of the eye because the oculists, so-called, would not understand him. Oculists, however, of the better class held military appointments.

With the Renaissance, much of folklore medicine began to disappear and a certain semblance of scientific effort became a part of what I have chosen to call the beginning of the adolescent period of specialism. Anatomy was developed by such men as Vesalius and the anatomists of this era who followed him: physiology by Harvey and a long line of successors such as Cannon, Bayliss, Starling and Howell, to mention a few men of our own generation. But to this, as to every other rule, there are exceptions. One of the earliest cardiologists was a man

who prided himself on the fact that he was a general practitioner, and never anything else. I refer to Sir James McKenzie.

The earnest inquiring spirit of the period of scientific awakening brought a new departure, the microscope, in the early part of the 17th century. What a list of specialties began with the intelligent use of this instrument—bacteriology, pathology, hematology, parasitology and immunology.

The background of orthopedics was laid in 1660 when Francis Glisson employed suspension in spinal deformities; of blood transfusion, when, in 1665, Richard Lower performed the first direct blood transfusion from one animal to another.

"It was not, however, until long after the revival of learning that medicine made sufficient progress to permit of any markedly advantageous specialism. Even the seventeenth century, with its individual scientific endeavor, and the eighteenth century, with its theories and systems, did not advance knowledge and technic to a degree compatible with a high grade of specialization. Really fruitful specialization in clinical work could not appear until after the natural sciences (biology, physics and chemistry) had undergone that great development that was witnessed during the nineteenth century."[‡]

The development of each specialty through its childhood and adolescence, with its "thumb sucking and temper tantrums," the period of silly dispensations, the period when it was stranded on the rocks of puberty, presents a most interesting and instructive study. Anyone who is at all interested in evolution could have had painted for him no clearer picture of change from homogeneous to heterogeneous, from birth to maturity, than that found in the growth of medicine and its specialties.

Someone has facetiously defined the specialist as one who knows more and more of less and less. This definition may not be so bizarre as at first it may seem. It is absolutely impossible for one mind, even a well-trained intelligence, to comprehend the vast body of medical and surgical knowledge as it obtains today, not to mention skill in performance. So that the only thing left for many is to attempt less and less and endeavor to know more and more of it. Physicians may limit their work to one

[‡]Dr. Lewellys F. Barker.

branch of medicine, such as bacteriology or clinical laboratory methods, or they may confine their attention to a particular region of the human body. This may or may not entitle them to be considered specialists. Many, perhaps most, physicians limit their field of practice to a greater or less degree. Specialism in the true sense demands extraordinary knowledge and skill in the chosen line of practice. This will not necessarily come with the number of years spent at it, unless these years are marked by intelligent effort toward improvement, which recalls the Hippocratic aphorism, "Life is short, art is long, opportunity fleeting, experience treacherous or deceptive, judgment difficult." The specialist then is one who not only limits his field of practice but one who possesses superior skill not only in diagnosis but in the application of methods of treatment, surgical or otherwise as well.

There is a tendency to emphasize the importance of the phase of medicine to which one has confined his attention. This can be obviated by building one's specialty on the broad base of general medicine. One must see the body or personality as a whole of which the particular organ is but a part. Even the psychiatrist, whose province is the mind, must not neglect the fact that he is dealing with a mind-body condition.

In a survey made recently by Dr. W. C. Rappleye, Dean of the School of Medicine of Columbia University, it was shown that fewer graduates of the Medical School are engaging in specialty practice. It would be interesting to know the relative numbers so engaged who have recently graduated from our own two medical schools. But Dr. Rappleye's findings may have a broader application than the State of New York. To be more specific, of those who graduated before 1900, 59 per cent are in general practice; 23 per cent limited to a specialty; and 18 per cent are in general practice with interest in a specialty; of those graduating between 1920 and 1928, the percentages are 75 per cent in general practice; 11 in specialty; and 14 in general practice with interest in a specialty. The important thing is the sharp reduction in the proportion of recent graduates who limit their practice to the specialties. "There is," says Dr. Rappleye, "a notable shift recently in the medical education towards discouraging young physicians from going into the specialties

without adequate preparation through post-graduate training, and an increase in internships designed to prepare students more particularly for general practice than for a single field of practice."

As a result of these findings, Columbia University has seen fit to offer a new degree of Master of Science, a safeguard to specialty, of which the following are the requirements:

A period of study, after the internship, of not less than three years in the university or in hospitals and laboratories recognized by it, at least one calendar year of which must be spent in the university.

Such intensive graduate training in the basic medical sciences of anatomy, embryology, physiology, biochemistry, pharmacology, pathology, bacteriology and in the other fields of science as shall be recommended by the departments concerned and approved by the administrative board on post-graduate studies in medicine.

An active experience during the three-year period of not less than eighteen months in the hospital, clinics and diagnostic laboratories of the specialty elected.

Written, oral and practical examinations and a dissertation may be prescribed in the specialty elected and in clinical laboratory and public health fields to which the specialty is related.

This is apparently an effort to replace the preceptor method of training specialists—a method which is, unfortunately, rapidly disappearing, due to the fact that there are so many good men in the various fields that it is impossible for one man to retain and train a corps of assistants, as formerly.

The greater field in medicine is still that of general practice. In a city such as Detroit, specialists are numerous and the general impression one gets is that they are in the ascendant in numbers. The medical profession in our larger cities is undoubtedly over-specialized, a condition which is painfully apparent during a period of depression. The trend, however, is in the opposite direction, I believe, in the larger cities of Michigan, as Dr. Rappleye has observed in New York.

There is a great field for general practice, perhaps greater than ever. The general practitioner of the present and of the future will not be of necessity the so-called old time type of general practitioner whose demise

with each obituary notice in the newspaper is deplored. He will be as up-to-date as modern educational methods and hospital experience can make him. He will meet the exigencies of general practice with modern equipment which will be as far in advance of that of the past generation as his automobile is over the old time equipage of

horse and saddlebags. Dr. Charles G. Jennings of Detroit has described him in an able address at the Founders' Day program of the University of Michigan Medical School. His address appeared in full in the December number of the Journal of the Michigan State Medical Society. I commend it to you.

TRANSURETHRAL PROSTATIC RESECTION: A RECENT DEVELOPMENT IN GENITO-URINARY SURGERY: A PRELIMINARY REPORT*

REED M. NESBIT, M.D.

ANN ARBOR, MICHIGAN

Within the past few years, improved methods for transurethral removal of vesicle outlet obstructions, although far from perfect, permit the confident hope that an era of radical departure in the management of these obstructive lesions has arrived.

Years ago Young devised the punch which utilized a cold blade within a fenestrated sheath. This enabled the operator to shear out obstructive lesions of the vesicle neck contracture type. Caulk improved upon this method, which was so often complicated by free bleeding, in the use of an actual cautery punch. The inner, or shearing sheath of the Caulk cautery punch provides hemostasis by virtue of a cutting blade activated to cherry red heat by electrical resistance. This instrument, so widely a vogue a few years ago, largely because of its prevention of immediate hemorrhage, has long since lost favor. The slough secondary to its actual cautery blade resulted in a high incidence of late hemorrhage. Some surgeons, led by the extremely skillful originator of this instrument, attempted to attack hyperplastic glands, with almost inevitable serious consequences.

In 1926, Maximilian Stern devised a new type of instrument which utilized the principle of the high frequency cutting current for excising prostatic obstructions. His instrument, like that of Young and Caulk, was composed of a fenestrated sheath, within which was a working unit consisting of a water conduit, electric light and a direct vision lens system. A sliding tungsten loop completed the working unit. This loop, when activated by the high frequency current, could be pushed forward, excising any tissue engaged in the fenestrum. Stern's idea seems to have been sound, but his instruments were inferior, and, more important, his instrument antedated development of satisfactory electrosurgical equipment.

Theodore M. Davis of Greenville, N. C., an ingenious surgeon, possessed of an electrical engineering background, saw the possibilities of the Stern Resectoscope and elaborated upon and refined it until he eventually evolved the instrument now known as the Stern-Davis Resectoscope. The changes involved in this evolution are of little interest to this discussion. The principles underlying it remain as Stern originally planned. More recently, McCarthy of New York has devised an instrument bearing his name, which differs somewhat in detail from the Stern-Davis in application of the principle of the movable loop.

The major development which rendered such instruments of practical worth was the production of electric currents capable of first cutting under water cleanly and quickly with a minimum of desiccation, and, second, coagulating under the same conditions so as to provide adequate hemostasis without extensive destruction of tissue.

Two such electrical generators have found favor among urologists thus far. One uses pliotron tubes, which produce a radio current of great frequency. This generator is made by the Comprex Oscillator Corp. of New York and bears the trade name of McCarthy Surgical Unit. The other utilizes a series of transformers and spark gaps to produce the high frequency current. This

*From the Department of Surgery, University of Michigan. Read before the Detroit Academy of Surgery at its Ann Arbor meeting January 14, 1932.

machine, known as the Davis-Bovie Electro-Surgical Unit, is manufactured by the Liebel-Flarschein Company in Cincinnati. Each of the instruments has its champions, as does each of the electrical generators.

We have used both instruments and both generators and are at the present time employing both types of resectoscope in our work, using the Bovie Generator. No doubt the future will bring forth many refinements and changes in our present equipment.

With the resectoscope, one is able, under continuous direct vision, to excise any vesicle neck obstruction, be it scar contracture, carcinoma or hyperplasia of the prostate, with practically no loss of blood and with surprisingly little postoperative reaction. Either low spinal or sacral anesthesia is used. In most instances the latter is adequate.

We need not go into a discussion of operative technic in this paper other than state that all operators thus far using this method have found it an extremely difficult procedure technically. There are undoubted hazards attached to its execution which are not to be minimized. This procedure will never be successfully practiced by the occasional resectoscopist or persons unskilled in cystoscopy.

Davis, in May, 1931, reported his first two hundred cases without a serious postoperative complication or a postoperative death. Recent reports of his work have shown the same results in his next hundred cases. The fourth hundred included two postoperative deaths. Alcock at Iowa City in a recent personal communication reports six deaths in one hundred eighteen cases. He attributes this high mortality to the fact that many of his cases have been extremely unfavorable risks from every standpoint. Fifty cases done at the University Hospital since October have not resulted in any operative mortality. At least 25% of this group were distinctly unfavorable subjects for the hazards of prostatectomy and had previously been simply placed on suprapubic drainage.

The preparation of the patient for resection should in no way differ from that employed for prostatectomy. The principles enunciated a generation ago for the management of urinary obstructions, which rendered prostatic surgery relatively safe, have undergone no change.

Some glands of unusually large size have, in the hands of all operators, required two, or in some rare instances three, resections before adequate removal of obstruction was obtained. No attempt is made to remove all of the gland. As in suprapubic or perineal prostatectomy prostatic tissue is always left behind. Usually the resection of 10 to 20 grams of tissue is sufficient to completely overcome the obstruction. The operation in skillful hands generally requires from fifteen to sixty minutes, depending upon the amount of tissue to be removed. Following operation the patient is left on catheter drainage for a period of two to five days.

Postoperative reactions are infrequent, and in most instances surprisingly mild, considering the age and general condition of many of the patients, as well as the amount of pre-existing infection present in the majority of cases. Two patients in our series have had chills with fever following resection, becoming afebrile in each instance within 48 hours.

The period of hospitalization following operation has been greatly diminished by this procedure. The average in Davis' first two hundred cases was under a week. Our experience is that in favorable instances uncomplicated by old suprapubic sinuses, chronic uremia, or severe heart disease, patients are ready to go their way in from seven to ten days. Some have gone home on their fifth postoperative day.

The incidence of recurrence of obstruction has not been established. Davis reports six in two hundred over a four year period. Inasmuch as no other series covers over a twelve months period, further statistics are not at this time available. The 3% observed by Davis compares quite favorably with the instance of recurrence following suprapubic and perineal prostatectomy. Certainly from the patient's standpoint, reoperation by this method is much to be preferred to that of any other.

Our experiences thus far with this method lead us to conclude that it is safer than any other at our disposal for the relief of obstructions of the bladder outlet. It reduces the removal of the obstructing prostate to a minor surgical operation with the accuracy of a cystoscopic procedure. The decreased hospitalization is of more than minor importance economically.

Heretofore the dread of the really formidable procedures that have offered their

only hope of relief has deterred patients with beginning obstructive lesions from seeking their correction until in most cases irreparable damage incident upon chronic prostatism has taken place. With the rela-

tive safety and short hospitalization of the transurethral method one can reasonably expect that the time will soon come when men with these beginning obstructive lesions will fearlessly hasten to have them corrected.

SOCIOLOGICAL ASPECTS OF CONTRACEPTION*

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Never has there been a time in the history of medicine when the physician has been free from the confidential approaches of patients seeking information for the means of preventing conception and for relief from an unwelcome pregnancy. Due to a world-wide financial depression and its economic influences, this has become more noticeable and more evident at the present time. It is a question that is attracting the attention of civilization and has a trend toward making demands of physicians quite out of harmony with the standards of medical ethics. It has become a problem for careful consideration and serious study of legislators, jurists, statisticians, religionists and social workers, as well as of the medical profession.

Although concerning all humanity, it is essentially a woman's question. Needless to say it primarily emanates from the women themselves. By a process of evolution, women have emerged from a state of bondage imposed upon them by the customs of the savage and middle ages and have proclaimed their rights for equality of freedom in social, economic and political life. They are now demanding the right to control their own sex life and are propounding this question before the civilized world. We cannot deny them the opportunity of being heard.

Time will permit tracing the history only briefly. The first references made to the prevention of conception are found in Genesis. We learn that Onan was punished for spilling his seed upon the ground in order to avoid impregnating his brother's wife. In the book of Exodus the Mosaic laws state the penalties inflicted upon man for injuring a pregnant woman. Prior to the Christian era, the practice of abortion was common among the Greeks and Romans, but little was known as to their legal attitude in regard to it. Hippocrates for-

bids criminal abortion in his famous oath. The Greek philosophers, Plato and Aristotle, favored the practice. Aristotle's opinion may be compared to that of the modern advocates of birth control. He says, "When couples have children in excess and there is an aversion to exposure of offspring, let abortion be procured before life and sense have begun." He went so far as to recommend it where the population had exceeded certain assigned limits. This was reiterated by Malthus, 150 years ago, when he proposed deferred marriage as a remedy for overpopulation.

In the middle ages, occasional pronouncements were made from time to time by ecclesiastical authorities. The Church thought that the life of the child must not be sacrificed even for the mother's benefit. Abortion was regarded as an anti-social act contrary to the welfare of the individual and of the state, unless performed for an adequate medical reason. Among the primitive savage races, infanticide seems to be more common than abortion, probably because it was easier to accomplish. Particularly was this common among the American Indians. Tradition tells us of the various methods employed by barbarous tribes to interrupt pregnancy, such as the practice by Chinese women of driving nails into the gravid uterus in order to destroy the fetus, of beating the abdomen with paddles and of piercing the womb with long needles. All through the Christian era down to the pres-

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ent time, there is historical evidence to show that our ancestors were compelled to deal with the question of impregnation control in some form or other, the same as we are today. Their laws and mandates, their religious convictions and their writings all prove it.

At the present time civilization has entered a stage of ultra-evolution. By the advances in science, the influences governing our existence have been changed to a degree that they have affected us industrially, politically, economically, socially, religiously, morally and physically. This has necessitated a complete revision of our sociological standards. In the field of science, discoveries and inventions appear so rapidly that before we have become familiar with them a new one is announced. Health standards are improved and the span of life has been lengthened. Today, we are advocating health examinations, mental hygiene and eugenics. The trend is toward health conservation. The world is clamoring for enlightenment. Preventive medicine is now confronted, as it once was, with the contagious and communicable disease problem, with the vital question of race betterment and race control.

The factors which have brought this question before the world are female trends to cope with the physical, eugenic, social, moral and economic conditions affecting their sex, which are being demanded of them by the progress of civilization. It is an evolutionary movement, but it is being retarded by antiquated legislation, the influence of religious controversy and the indifference of the medical profession. However, comparatively rapid progress is being made, for some of the nations have revised their laws to conform to the trend of the times and there is every evidence of increased activity in others. Early statistics, now being collected, prove that the movement is gaining wide favor, as a worthy cause to womanhood.

The means by which the control, interruption and prevention of pregnancy are carried out are by contraception, abortion and more recently by permanent sterilization.

Contraceptive measures have been used for years by the upper classes, probably because of their intelligence and means of easily obtaining information. Even though there have been laws in practically every

nation in the world forbidding the dissemination of contraceptive information, nevertheless it has been freely obtainable by those who have sought it. Contraceptives are generally condemned by the church and state, but they are widely sold in response to the laws of supply and demand. There is no better way of imagining the extent of this supply and demand than to ponder over the simple statement that one-fourth of the adult population of the world is concerned, at least twice a week, with the decision "to procreate or not to procreate." In the United States it is estimated that 62 per cent of married couples of childbearing ages are constantly unfertile—that is, that the wife is neither pregnant nor nursing a child. It is safe to say that this proportion of married population must quite evidently practice some form of impregnation control, else our national birth rate would be decidedly higher than it is at present.

France restricted her birth rate one hundred years ago, and fifty years ago Holland started contraception. The New York Obstetrical Society began to investigate it in 1923 and the New York Academy of Medicine and the American Gynecological Society approved a program of study in 1924. Later, lay organizations and philanthropists became interested. In 1929, there were twenty-nine birth control clinics in the United States, proclaiming the rights of women in the "Prevention of conception for medical, social and economic grounds." Today there are eighty-one located in seventeen states. All of us are familiar with the name of Margaret Sanger, the pioneer of the American birth control movement, who gained considerable notoriety some years ago as a martyr for the cause.

There are those who argue that knowledge of contraception increases immorality by offering protection against pregnancy to unmarried women, but the amount of harm is small compared with the preponderance of benefits to women deserving of consideration. Furthermore, women of unblemished virtue defend its cause and advocate it on the highest moral grounds. It has been said repeatedly that birth control will diminish the birth rate, but in such countries as Holland, Switzerland, and especially Soviet Russia, where it has already been in force for several years, there is no statistical substantiation of this statement.

Students of statistics freely claim that contraception is the greatest single factor in preventing illegal termination of pregnancy, in avoiding the complications of abortion, resulting in the death of the unfortunate woman, and in affording parents the right to limit their children to the number they can adequately provide for and the number that is consistent with the mother's health and strength. It should prevent large families among those who usually live in poverty. Birth control in this respect is preventive medicine.

In all civilized countries criminal abortion is forbidden by law, but unfortunately the laws are ineffective. Illicit abortion in the United States has been termed "The National Disgrace" and statistics seem to indicate that it is entitled to this name. A review of reports from sections of the nation shows that the death rate among unmarried women of ages 17 to 28 followed complications from abortion in estimated percentages ranging from 18 to 43. In married women it is estimated that 25 per cent of all pregnancies terminate before viability and of these one-fourth to one-third are criminally induced. In Michigan, in 1930 there were a total of 144 abortion deaths of which 119 were the result of septicemia. Does it seem unreasonable to assume that the majority of these were due to criminal interference? And, too, one must not lose sight of the fact that thousands of abortions require no medical attention.

An analysis of ninety questionnaires sent out by the Civic and Industrial Relations Committee of the Michigan State Medical Society to hospitals in the state reveals some interesting data, as follows:

	1929	1930
1. Number of Maternity Cases (at term)	23,406	26,590
2. Number of Maternal Deaths (among above)	142	156
3. Number of Infant Deaths (among above)	821	817
a. Stillborn (among above)	944	1,053
4. Number of Abortion Cases	1,711	1,999
5. Number of Abortion Deaths	132	137
a. Criminal	89	74
b. Therapeutic	29	39

The deaths among the abortion cases for the two years average 7.25 per cent, of which 4.5 per cent are criminally induced. There is no manner in which it can be determined accurately upon what grounds these abortions were induced, but certainly

some of them must have been for social, economic, eugenic and moral reasons, as well as for purely medical indications. In such countries as Germany, Switzerland, Norway and Sweden, the women have agitated the question to such a degree that there is a decided trend toward permitting legalized abortion for economic, eugenic and social reasons. For ten years Soviet Russia has had legalized abortions and is the only country in the world where a woman has the right to request that abortion be performed for other than therapeutic indications. The Russian government has established well-regulated "abortaries" to which a woman may apply for aid and receive it, providing she is not more than three months pregnant, and can show a justifiable cause as to why she should be aborted. The experience there is that it takes the initiative from the criminal abortionist and shifts it to the legal channels of a modern hospital.

With this regulation in force the Russian birth rate has not been materially affected. The motives for abortion are: poor economic conditions, 48 per cent; desire not to have a child, 10 per cent; desire to hide pregnancy, 0.5 per cent to 4.1 per cent; various illnesses, 21.6 per cent; and the presence of a nursling in the family, 6.8 per cent. Extra-marital pregnancy in itself is not a legal excuse for abortion in Russia, but it may be performed if one of the accepted reasons is present.

Other nations have taken cognizance of Russia's experimental attitude regarding abortions and are engaged in studying the question as it applies to their individual situation. Most of them frown upon legalized abortion and are more in favor of contraception as the proper procedure. However, in Germany, Dr. Julius Wolf, noted professor of political science, and Dr. Max Hirsch, famous gynecologist, both favor abortion. In an article, "Mütter oder Embryo," Doctor Wolf argues that "the present law is a survival of barbarism, emphasizing the misery of the woman who becomes a mother against her will and the great suffering caused by abortion brought about by charlatans." Both of these eminent scientists believe in abortion when the capacity of the mother to bear children is affected and for eugenic and economic reasons. As a whole, the ethical medical profession is strongly opposed to legalized abortion. It is unques-

tionably justified in taking this attitude, because of the concomitant moral and physical damages to humanity, which would result from injudicious application.

The value of permanent sterilization is generally admitted. Where there is need of preventing offspring among mental defectives, the ignorant, the vicious and brutal, and confirmed criminals, there is little contrary argument. A convincing example of this is the famous case report of Dr. F. Naville of Geneva. He gives the history of several consecutive generations of a family in which vagrancy, alcoholism, immorality, prostitution, imbecility, insanity and criminality were inherited characteristics. In five generations, consisting of 834 subjects descended from one mentally defective female, there were 181 prostitutes, 142 beggars and vagrants, 76 criminals, including 7 murderers, and 64 who had been imprisoned for various misdemeanors. From them there were 106 illegitimate children born. A total of 116 years in prison had been spent by them and 734 years of support had been given by the state, representing a cost of \$1,200,000. The United States spends millions annually for institutional care of the insane, criminals and mental defectives produced from similar sources of ancestry. Our institutions at present are tremendously over-populated. And yet the "war between moral theology and expediency is destined to continue for many years to come."

What the future holds forth, no one can predict. The influence of science, religion and education has a definite trend toward revision of the legal, economic, eugenic, social and marital aspects of the whole question. The general drift is toward procreation of the healthiest type of human life. This means restriction of parenthood for the physically and mentally unfit; limitation of large families among those unable to conform to the normal economic bounds of the age in which we live; preservation of mothers and conservation of child health.

Science teaches us that nature has its own birth control laws, which exist throughout the whole plant and animal kingdom. Every species reproduces many more of its kind than can possibly survive. Religion is beginning to favor the demands of the movement, as is shown by the recent activities of regional groups of the Methodist Church. Education of the civilized world in science,

eugenics and economics is the main factor for propelling the birth control movement to a successful end, and not the fanatic demands of selfish womanhood trying to avoid pregnancy. The latter will invoke the wrath of the Church and ultimately result in disastrous misunderstandings, leading to defeat of the cause.

It is the duty of the medical profession to point out the harmful as well as the beneficial effects of birth control upon the health of the prospective mother, and its influence upon civilization. Many of the present methods of impregnation control are in various degrees inefficient, unhealthy, contrary to the laws of the state and nation, injurious and dangerous. Why? Because they place the control of conception almost entirely in the hands of womanhood. Any recognized means of conception control should depend upon the revelations of modern medical science and should be governed by proper and up-to-date legislation. The medical profession and the state should work in harmony in determining the best scientific and legal procedures. Naturally, great responsibility rests upon the medical profession.

Scientific researches have a trend along biologic lines and the future may develop methods of contraception which eliminate any personal factor and prove more satisfactory. Guyer, McCartney and Mudd have reported upon spermatoxin for inducing temporary sterility. Recently, Kastromium and Kartashev of the Perm Institute in East Soviet Russia, Babadoghy of Odessa, together with Schorakova, Kolpikof and Lalin have experimented upon one hundred women with serum prepared from the semen of the corresponding husband of each woman. These investigators are working on the theory that semen, biologically prepared and injected intra-muscularly into the wife, will render her temporarily sterile against her own husband. Such a method would place contraception in the physician's hands, make abortion unnecessary and subject the whole procedure to legal control.

A day may soon come when the world's population may be controlled by scientific factors and be limited to national apportionment. "Scientific birth control means scientific life." The whole question of impregnation control is the most pressing problem in forensic medicine today and the medical

profession should be the first to contribute the scientific facts, which will ultimately lead to the solution of this vital problem affecting civilization. It is a medical problem and the medical profession should become the leaders and controllers of it rather than let the general public supplant it.

The Michigan State Medical Society may well appoint a committee to study this question and make recommendations as to the governing regulations for birth control clinics in this state, four of which have already been organized.

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GALL BLADDER SURGERY IN THE AGED

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The mortality rate in gall bladder surgery is high. Four factors contribute to this. (1) An extreme toxicity often accompanies gall bladder pathology. (2) The anatomical relations in this region are complex, making cholecystectomy a formidable operation, especially if adhesions are present. (3) The bile ducts and blood vessels vary greatly in their courses in different individuals, the gall bladder itself often assumes an extraordinary, grotesque form, and may rest in a position wholly unexpected and inaccessible. (4) Shock is always severe, particularly so after operations in which the liver has been exposed and manipulated. So dangerous and difficult is gall bladder surgery that a timid surgeon may hesitate to operate, when an operation is plainly indicated. This is especially true in the case of the aged patient. The relatives may reason that the patient's span of life is short at best, so why subject her to a painful operation, if there is the least doubt about recovery. "Why not let the old patient die peacefully?" To this argument the inexperienced surgeon may yield. However, such reasoning is, as a rule, fallacious, for experience shows that the majority of these old people not only recover from the operation but often live without discomfort for years. Even if the patient be over three score and ten, an operation should not be denied her, if there is any chance of recovery.

The literature on gall bladder surgery is

full of instructions for the preparation of patients before operation. I shall not repeat these, except to say that, when possible, all preparations should be carried out carefully and completely.

Attention to the anesthetic is of prime importance. Never use ether. Invariably, hypostatic pneumonia will follow its use. Spinal anesthesia, local anesthesia, gas-oxygen or ethylene are the anesthetics of choice. Spinal anesthesia has been the most successful in my cases.

The operation itself should be performed with the greatest gentleness and care. The highest qualities of the surgeon will be called into play. It is better to do too little than to do too much. One must not linger to explore the abdominal cavity as he would in the young and strong. Adhesions are not broken up unless menacing life. The appendix is not sought. To quote the late John B. Deaver, "Get in quick and get out quicker," though I seldom advise hasty operating. Lord Moyrihan writes, "In gall

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stone operations in older people suffering from severe infections, that operation is most desirable which gives the speediest relief." What is not done is of more impor-

the region of the outlet of the cystic duct. She made an excellent recovery, leaving the hospital ten days after operation. She is now 79, active and well.

Mrs. McK., aged 73, born in U. S. A. I saw her

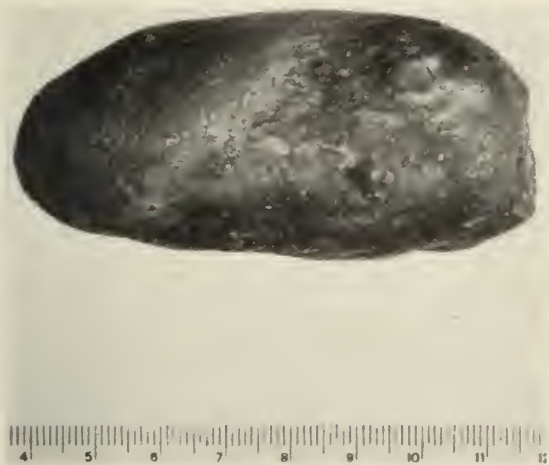


Fig. 1

tance than what is done. Find the gall bladder, pack off gently, open, clean out and drain. This is enough. A small incision is all that is required.

When the patient is returned to bed, after reacting, she is immediately put up in a sitting posture. This is the chief position until ready to get out of bed. Abundance of fluids are given as soon as they can be tolerated, glucose is administered by mouth, by rectum and intravenously.

Two of my most interesting cases were women, each over 70 years old when operated upon. Their case histories are outlined as follows:

Mrs. T., aged 72, born in Germany, a small thin woman, complained of great weakness, indigestion and discomfort in the region of the epigastrium. Has always been active, although troubled with indigestion and abdominal pain, at intervals, for thirty years. Never had any serious illness and no former operations. Has four children, alive and well, husband dead. When seen she was in bed, very much depressed and slightly jaundiced. Her heart was slow, 60, and irregular. She was apparently very toxic. Abdominal examination revealed a tumor in the right epigastrium, below the costal margin, the size of a small fist, hard and tender. She had formerly been told that she had gall bladder disease and been advised to have an operation, which she had emphatically refused. When I saw her she was so sick that she requested an operation at once. Cholecystostomy was performed. The gall bladder was distended, its walls thin, filled with black fluid full of sandy particles. One stone, the size of a marble, was impacted in



Fig. 2

for the first time in March, 1931. A large woman, in bed, in a semi-conscious condition. Had been in bed for three days, apparently very toxic. Husband alive and one adult child. Has had no former operations. Has had attacks of indigestion and abdominal pain at intervals since she was 38. Abdominal examination revealed the whole right side rigid and a mass could be outlined extending from the right costal margin downward to the brim of the pelvis. This condition had developed recently. The patient was slightly jaundiced and a diagnosis of ruptured gall bladder was made. At operation, the gall bladder was found not to be ruptured but was enormously distended. It was adherent to the transverse colon and contained six pints of black, gritty fluid. The largest gall stone I have ever seen was impacted down in the region of the cystic duct (Fig. 1). A rubber tube was stitched into the opening in the gall bladder; this tube came away of its own accord in ten days. The patient improved rapidly. Two weeks after operation, drainage lessened and a slight elevation of temperature was noted. On examining the drainage fistula, what seemed to be a plug of thick mucus filled the opening. When I attempted to remove this with forceps, to my surprise and chagrin, the whole gall bladder came easily away (Fig. 2). Nature had performed its own cholecystectomy. The patient was but little disturbed. Within a few days the temperature became normal again. She left the hospital three weeks after the operation and in four and one-half weeks all drainage had ceased and the wound was completely healed. At present, about nine months after operation, the patient is active and comfortable.

In the past four years I have operated upon eleven aged patients for gall bladder disease. The oldest was 73 and the youngest 60. The average age of these eleven patients at the time of operation was 70 years. They were all females. One died five days after operation from pneumonia; all the others are still alive.

BONE GRAFTING: SOME FUNDAMENTAL PRINCIPLES*

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The foundation of our knowledge of bone growth and bone repair preceded any practical application of bone grafting. Belchier, Duhamel, Hunter, Hilton, Ollier and others had acquired a considerable knowledge of bone physiology and bone pathology but they did not realize the clinical possibilities of bone grafting because they lived before Lister had demonstrated that sepsis could be controlled. Rigid asepsis is one of the essential surgical principles upon which successful bone grafting depends. Sir Arthur Keith states: "He [John Hunter] had come as near as any man has yet attained to an understanding of the nature of living matter and of the conditions which are necessary for the successful implantation of a living graft amidst living tissues. We see he failed because of sepsis; sepsis ruined the brilliant programme he had conceived. If Pasteur and Lister had been born before him, he would have succeeded."

The grafting of bone to prevent and correct deformities and to assist the inherent recuperative powers of the human body to check or cure destructive bone lesions is now an established surgical procedure. Sir William Macewen of Glasgow first demonstrated the practical application of bone grafting. In 1880, he reconstructed the shaft of a boy's humerus which had been partially destroyed by osteomyelitis. The gap or defect of the humerus was bridged by homogeneous tibial bone grafts. The grafts fused with one another and with the proximal and distal fragments of the humerus and the function of the extremity was ultimately reestablished. Macewen's operation was successful because he applied the principles and conditions which determine the success of the grafting of bone.

At the present time the applications of bone grafting are varied and many and are essential for the remedy of many disease processes. The pathological conditions frequently requiring bone grafting operations may be outlined as follows:

1. Congenital and developmental defects of bone (congenital non-union fractures and spondylolisthesis).
2. Bone defects resulting from osteomyelitis.

3. Selected cases of fresh fractures.
4. Delayed union fractures requiring open operation.
5. Non-union fractures.
6. Bone defects resulting from resection of benign bone tumors.
7. Stabilization of joints (skeletal tuberculosis, infantile paralysis, fractures, scoliosis, and certain forms of arthritis).
8. To improve the mobility and stability of joints (infantile paralysis, spastic paralysis, and congenital dislocation of the hip).

Numerous surgical procedures and varying technics for the grafting of bone have been developed in recent years; however, there are certain principles common to all. The success of any one of the methods depends upon the recognition and proper application of the underlying principles which are to be discussed in this paper. The surgical and mechanical principles to be observed in bone grafting operations may be listed as follows:

1. Rigid asepsis.
2. Highest possible local resistance.
3. Highest possible general resistance.
4. Preliminary correction of soft tissue contractures and deformities.
5. Perfect hemostasis.
6. Minimum of surgical trauma.
7. Susceptibility of graft to external influences.
8. Autogenous grafts serve best.
9. Independent viability and osteogenetic properties of bone grafts.
10. Freshly denuded graft-bed.
11. Firm contact between graft and graft-bed.
12. Complete immobilization until solid bony union between graft and graft-bed.

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13. Grafts must be subjected to physiological stresses and strains which stimulate the activity of the osteoblasts.

Asepsis is properly placed first in the list of principles because of its great importance. The laboratory experiments of bone transplantations found no practical application until after the advent of aseptic surgical technic. Sepsis, complicating a bone grafting operation, favors a surgical disaster. The chapter in the history of medicine on "bone transplantation to remedy bone" was not and could not have been written before the time of Lister. Bone grafting should never be done in the presence of active infection. The history of a previous infection in the field of operation always makes the forecast as to the result of the bone grafting procedure uncertain. A previous infection of the bone or soft tissues although quiescent for a period of months or years may become active following the surgical treatment.

As a rule, bone grafting operations are delayed for a period of at least six months after any active infection in the field of operation. However, there is no safe clinical test to determine the postoperative course whenever a previous infection existed. Bone grafting operations require a rigid observance of the Listerian principles. Scrupulous aseptic technic should always be used. The skin should be excluded from the operative field. The gloved hand and instruments which enter the wound should never touch the skin. The minimum of talking is an important factor. There should be great respect for all soft tissues and the technic employed should result in the minimum of surgical trauma.

Since bone grafting operations are of election and not of emergency, every effort should be made to establish the highest possible local and general resistance. The integrity of the circulatory and neuromuscular systems is of particular concern locally.

Edema, sluggish circulation and diminished muscle tone are conditions which are frequently present in the field to receive the transplant. These conditions can be favorably affected by proper forms of physiotherapy, including elevation, heat, massage, contrast and whirlpool baths and active muscular contractions. Preliminary grafting of skin may be necessary to prepare the field if

pressure ulcers or extensive scar tissue exists. Correction of soft tissue contractures and fixed deformities preliminary to the bone graft operation is often necessary. Contracture deformities with loss of function of the foot, knee, hip, spine, shoulder, elbow, wrist and hand are conditions which must receive proper consideration before bone grafting. The integrity of the soft tissues controlling the joints proximal and distal to the field of operation should be re-established if possible in order to restore function of the joints, anatomical relations and normal weight bearing lines.

Contracture of the quadriceps muscle resulting in partial or complete loss of knee joint function frequently complicates non-union fracture of the femur and tibia. This deformity may be considered briefly for illustration of the above principle. If the contracture is not remedied before bone grafting for the non-union, then, as a result of the surgical trauma and prolonged period of complete immobilization in plaster, the contracture increases and may result in a fixed and permanent disability of the knee joint. Quadriceps contracture may frequently be entirely corrected by proper forms of physiotherapy. Recurrence of the contracture during the period of postoperative immobilization in plaster can be prevented to a great degree by instructing the patient to actively contract the involved muscle at stated intervals. Soft tissue contractures respond favorably to various forms of properly applied physiotherapy, which includes heat, contrast and whirlpool baths, massage, active muscular contractions under water, swimming and stretching exercises and also by mechanical apparatus such as adhesive traction, wedging plaster of Paris casts, banjo splints, and other special forms of apparatus. Open operation is occasionally necessary to correct deformities which do not respond to the more conservative measures.

Perfect hemostasis and the minimum of trauma during the operation are obvious surgical principles and should not require special mention. The use of a tourniquet is not essential in any bone grafting operation and, in fact, its use is contraindicated. A tourniquet may be the cause of a delayed postoperative hematoma, the presence of which may require a second open operation which increases the incidence of postopera-

tive infection. A hematoma favors a suppurative process which is often disastrous in bone grafting. Blood clot between graft and graft-bed interferes with fusion. Oozing from the graft-bed should be controlled before implantation of the graft. The minimum of surgical trauma is obtained by the use of proper anatomical dissections for the exposure of the field of operation and by careful subperiosteal development of the bone to receive the graft. The use of motor driven instruments as perfected by Albee will do much to minimize the surgical trauma to bone and soft tissues.

The free detached bone graft should be treated as a delicate tissue and any factor which interferes with its vitality should be avoided. The graft should be kept moist with normal warm saline and should never be permitted to become dry. It should never be crushed with forceps and should not come in contact with chemicals which could destroy the living cellular elements.

Two surgical teams may work together, one preparing the receiving field and the other developing the graft to be transplanted. If the two-team method is not possible, then the graft-bed should be developed first, whereby the graft can be transferred directly to the graft-bed, thus eliminating some of the dangers of external influences.

Autogenous grafts serve best. This fact has been definitely established by numerous laboratory experiments and by surgical experience. It is highly probable that one can explain the fact that auto bone transplantation is more successful than homo or hetero transplantation on the basis of our knowledge of tissue compatibility. Transfusion of blood is, in fact, a form of tissue transplantation. Landsteiner demonstrated the presence of iso-agglutinins in human blood and found that individuals fell into several different groups. There is, normally, a constant compatibility between an individual's blood serum and his own blood cells and also with the blood cells of certain groups of his own species. Incompatibility exists between the human blood serum and the blood cells of other species. Probably there is a relation between the phenomena of blood compatibility and bone compatibility. Transplantation of less differentiated tissues as fascia and bone is attended with much greater success than the transplantation of

the highly differentiated tissues whether dealing with auto, homo, or hetero transplantation. It is also a well known fact that homo transplantation has a considerable degree of success in the lower forms of animal life and hetero transplantations are highly successful in the plant kingdom. Homoplastic bone grafts, or those derived from another human individual, may be used successfully, though not with the same certainty of success as autogenous bone grafts. Fortunately, the adult human skeleton is so constructed that certain portions may be removed for the purpose of serving as grafts without jeopardizing any of its functions. Autogenous bone grafts are practically always available in the adult. However, in infants and young children it may be unwise to obtain the graft from their own skeleton, particularly when massive bone grafts are desired. In such instances, an adult member of the child's family may act as a bone donor. A portion of the shaft of the tibia and fibula, one or both tables of the wing of the ilium and ribs are the usual sources for obtaining bone grafts without danger of resulting disability or loss of skeletal function.

Human homoplastic bone grafts are used successfully because bone is one of the less differentiated and lower orders of tissue. Human homoplastic transplantations of the highly specialized tissues results in failure.

Living tissue removed from the organism and completely detached from nerve and blood supply may live and grow in normal warm saline solution. This period of independent viability is a characteristic of all transplants and is true of all tissues of the lowest and highest species. The period of independent viability varies considerably with the various tissues of the organism. Epidermis and periosteum may remain viable for a period of two or three weeks or longer, whereas the period of independent life of nerve or liver tissue is very short. One important factor which determines the period of independent viability is the size of the tissue transplanted. A massive bone graft has a much smaller surface area in contact with the medium which supplies the source of nourishment than the same graft separated into a multiplicity of smaller fragments or chips. The multiple bone chips have a greater surface area in contact with the nutritional medium and it is reasonable

to believe that the period of independent life and growth of the chips is greater than in the massive graft. The blood serum and lymph surrounding the bone transplant are the sources of nourishment of the graft until it becomes re-vascularized. Codivilla first called attention to the great osteogenetic powers of osteo-periosteal grafts. Both massive and small bone grafts become re-vascularized during the period of independent viability and growth but the osteogenetic power of the smaller chip grafts is greater than that of the massive graft, as often demonstrated by surgical experience. A massive graft, because of its size, possesses a mechanical strength which is often a desirable feature. The combination of a massive graft and multiple bone chips or shavings, because of greater mechanical support and greater osteogenetic properties, respectively, forms the ideal procedure in the majority of bone-grafting operations.

A freshly denuded graft-bed and firm contact between graft and graft-bed are principles which surgeons recognize in the transplantation of all tissues. Early re-vascularization, continued viability and firm uninterrupted fusion between graft and graft-bed are the conditions which result from observing the above principles. Solid, bony union between graft and graft-bed results within a period of about one month when the graft is well contacted with a freshly denuded graft-bed. Albee states that, "The most important rule of the process of grafting in the vegetable kingdom is the contacting of the alburnum of the scion or graft to the alburnum of the stock, or the part grafted. The contacting of the corresponding histological layers is not of such paramount importance in the grafting of bone as it is in vegetable life, but the importance of its observation is unquestionable." Surgical experience does not support Albee's statement, since excellent results are obtained with massive on-lay grafts and with multiple bone shavings placed in contact with the denuded surface of the cortical bone. Surgical experience has also demonstrated that periosteum is not essential for successful bone grafting. The majority of the

bone grafts used in our clinic are periosteal free. The shaft of the tibia, when used as the source of a graft, is exposed subperiosteally. The developed graft consists of cortical bone and endosteum, each containing large numbers of the specific osteogenic cells.

Successful bone grafting depends upon the principle of subjecting the graft to the physiological stresses and strains which stimulate the activity of the osteoblast. The grafts which Ollier implanted beneath the scalp and amongst muscles were gradually absorbed. He did not realize the importance of a principle which Murphy expressed when he stated that, "The amount of growth in a bone depends upon the need for it."

Transposition of the fibula to bridge a defect of the shaft of the tibia serves as an excellent illustration of this principle. The transplanted fibula is subjected to the physiological stresses imposed upon the tibia. The fibula hypertrophies and gradually approximates the size and shape of the normal tibia because, as Wolff has stated, "Every change in the form and the function of a bone or of their function alone, is followed by certain definite changes in their internal architecture, and equally definite secondary alterations in their external conformation, in accordance with mathematical laws."

Hunter attributed a form of "consciousness" to living bone. Grafts which the body does not need and grafts not subjected to muscular stresses and strains are gradually absorbed.

This principle may be observed when one studies the gradual but ultimate fate of bone fragments in comminuted fractures which are displaced in the soft tissues and removed from physiological stress and strain. The loose fragments, disconnected anatomically and physiologically from the skeleton, gradually become absorbed.

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APPENDICITIS UNDER TWO YEARS

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The unexpected finding at autopsy of a gangrenous appendix in an infant of eighteen months who had for a period of nine days been suffering from nausea, vomiting and watery green stools, emphasizes the difficulty of diagnosis of acute appendicitis during the first two years of life. The literature records so relatively few cases of acute appendicitis in patients under two years, that it seems worth while adding another case together with a brief discussion of the condition. While statistics seem to prove the rarity of the condition during this age period, it is probable that the diagnosis of acute appendicitis in infants is often missed, it being made only in the more typical cases.

Baby R., male, 18 months old, previously well, was suddenly taken ill June 13, 1931, with vomiting. Then followed the passage of watery green stools so that the child entered the hospital with a diagnosis of gastro-enteritis. After admission to the hospital the loose green stools continued but never more than three stools in the twenty-four hours. Vomiting persisted and the child became drowsy and stuporous from the acidosis and toxemia. Leukocyte count was 17,850, polymorphonuclears 79 per cent. The urine showed moderate amounts of albumin and acetone. Temperature was never over 102.8 degrees. When seen by the writer in consultation on June 21 (8th day of the disease), the child presented the picture of extreme acidosis, *i.e.* deep stupor, dilated pupils, hypernea and odor of acetone on the breath. The acidosis seemed to be accounted for by the fact that the child had been kept on barley water for a full week, very little of which had been retained. The absence of muscle spasm and undue abdominal distension coupled with the history of gastro-intestinal disturbance of several days standing seemed to make the diagnosis of gastro-enteritis with acid intoxication quite certain. Glucose and saline were given to relieve the acidosis, but on the following day the baby died. Autopsy findings were reported as follows: "On opening the abdomen a large quantity of pus escaped. The intestines are distended and portions of the loops are fastened together with fibrinous exudate. The appendix is necrotic and there is a rather large perforation near the base. A fairly large concretion lies free in the abdominal cavity."

DIFFICULTY IN DIAGNOSIS

There are several reasons for failure to recognize acute appendicitis in infants. In the first place these little patients are so frequently subject to temporary or functional gastro-intestinal disturbances, and vomiting and fever are so common in the onset of many diseases other than abdominal, that the doctor is apt to trust to the law of chance rather than to go thoroughly into the history and make a careful examination. Abdominal palpation and in suspicious cases white and differential counts should be

routine in all cases suggesting abdominal pathology. There is, of course, the admitted difficulty in making a careful abdominal examination on patients of this age. In this connection the importance of rectal examination and examination under light anesthesia are to be remembered.

In the second place the disease usually runs a course different from that in adults. It is more insidious. There are fewer positive symptoms and a greater tendency to general septic peritonitis with little previous warning.

Thirdly the atypical location of the appendix in some infants makes diagnosis more difficult, but perhaps the most important cause of missing the diagnosis is our failure to consider it as a possibility. As Howland¹ so well says in his paper on this subject, "The primary requisite for the diagnosis of a disease is the appreciation that it may possibly be present." When an adult develops acute abdominal pain with vomiting and fever he tells the world, including the doctor, about it, and the first thing considered is appendicitis. When an infant develops a similar condition, about the last thing that is thought of is appendicitis, and all too often a careful examination is not made until perhaps too late in the disease. In dealing with abdominal pain, vomiting and fever at any age, a safe rule would be to assume that the appendix is involved, and then to proceed to verify or rule out the suspicion.

INCIDENCE DURING FIRST TWO YEARS OF LIFE

How frequently does appendicitis occur during the first two years of life? This question may be answered by a study of the age incidence of 500 cases of appendicitis, occurring during the first twelve years of

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life reported at the Edinburgh Children's Hospital.² In this series of 500 cases there were only three in infants under one year while in the second year there were eleven cases, nearly four times the incidence of the first year. From a study of this curve one would conclude that the disease is very rare during the first year but thereafter the condition becomes progressively more common each year until about the eighth, after which it seems to maintain about a uniform rate up through the age of puberty and early adult life.

Holt considers appendicitis exceedingly rare in infancy, the condition having never once been found in about 2,000 autopsies, nearly all upon children under two years in three institutions with which he was connected. He speaks of having seen clinical cases once at nine months and once at fourteen months, and quotes a case of Gayen's in an infant only six weeks old, one of Shaw's and one of Demme's each at seven weeks and Savage's at nine weeks.

Deaver³ states that 15 per cent of all cases occur under the fifteenth year, of which but few are under the fifth year.

Abt⁴ in 1917 searched the literature and was able to find only eighty cases in infants under two years.

Morse⁵ is inclined to believe that appendicitis is not as uncommon in infancy and early childhood as is usually believed and that the apparent rarity in early life is because, on account of the indefiniteness of the symptoms and the difficulty in their recognition, it is usually overlooked unless perforation occurs and general peritonitis develops.

In order to get more definite information regarding the frequency of appendicitis during infancy, letters were written several of the large children's clinics of this country requesting a statement of their experiences. The following reports were obtained.

Brennemann of the Children's Memorial Hospital, Chicago (June 27, 1931), recalls having seen but one case under two years of age and concludes by saying that appendicitis is either extremely rare in infancy or else it is not diagnosed. He believes that the condition most likely is extremely rare.

Julius Hess in a communication (July 10, 1931) states that of 193 cases of appendicitis operated at Sarah Morris Hospital, Chicago, during the last three years,

there was only one case under two years. In addition to this single case, during this same period of time, Hess had six cases of general peritonitis in children under two years of age, where the source of penetration through the intestinal tract was unknown. Possibly some of these may have had a primary seat in the appendix, but it is more likely that these were cases of primary peritonitis resulting from blood stream infection with such organisms as the streptococcus, pneumococcus and influenza bacillus. This type of case presents an added problem since they usually respond so poorly to surgical treatment, some observers feeling that when the diagnosis of primary peritonitis is made the case should be handled medically. However this may be, until we have some more definite means of differentiating between primary and secondary peritonitis it is likely that the best of medical and surgical opinions will find it expedient to continue to operate practically *all* peritonitis cases, for fear of withholding the advantage of drainage from some case that needs it. Primary pneumococcic peritonitis as described in pediatric literature is most often seen in older children and so is not dwelt upon in this paper.

Cutler of the Boston Children's Hospital in a letter dated July 2, 1931, states that of the 300 cases which he has personally operated in that hospital, there were no cases in the first year of life and six cases in the second year. His records showed the incidence to increase rapidly after the first year, reaching a more or less stationary level at about the time of puberty. During the first five year period Cutler had 106 cases with seventeen deaths—a mortality of 16 per cent. The mortality after five years was seven deaths in 194 cases or only 3.6 per cent. These figures bear out so well the greater risk in dealing with appendicitis in early life.

From the University of Michigan, Parsons replied that in the past six years four cases under two years of age had been seen.

Marriott of the St. Louis Children's Hospital, on July 9, 1931, replied that during the last two year period the diagnosis of appendicitis had been made, either antemortem or postmortem, on 201 children. Of these, only three were infants under two years. In two of the three the appendicitis was the primary condition; in the third, a complication of intussusception.

REASONS FOR LOW INCIDENCE

The low incidence of appendicitis during the first two years of life is supposed to be partly due to the relatively *small amount of lymphoid tissue* present during that period. After the second year the lymphoid tissue begins to increase in amount and to extend until it reaches the maximum of its development about the twentieth year. It is generally accepted that the greater the amount of lymphoid tissue, the higher are the possibilities of infection. A second factor which may play a part in making young children less susceptible to appendicitis is the fact that the toxicity of the intestinal flora alters as the child grows older. In the majority of instances *B. coli* is the organism responsible for the infection, and it is an organism which displays the most remarkable variation in virulence. Soon after birth, when intestinal digestion first begins, its virulence is comparatively slight, but as the child grows older the organism becomes more virulent, the increase being stimulated by the greater complexity of the diet and possibly by incidental attacks of gastro-enteric disturbance. Also, the appendix of the infant when compared to that of the adult is *relatively larger* in proportion to the body, and is *considerably larger* in proportion to the alimentary canal. This fact of the larger organ together with a more funnel shaped opening from the cecum promotes better drainage into the cecum.

HIGH MORTALITY DURING INFANCY

While the above mentioned factors seem to result in a low incidence of appendicitis during the first two years of life, it is a well known fact that the mortality rate is especially high during this period. This may be explained by the thinness of the appendiceal wall, the small, poorly developed omentum, and the less definite parietal fixation of the intestinal loops, all of which provide less chance of walling off the infection, and permitting the early development of a generalized peritonitis. In addition to this, young children tolerate all septic infections particularly badly. In many children the meso-appendix is very short, leaving that portion of the appendix which extends beyond it deficient in vascular supply. Also there seems to be a lesser tendency to the formation of protective adhesions and the adhesions are more delicate and easily torn.

SYMPTOMS

The symptoms of acute appendicitis are *essentially the same* in infancy and early childhood as later. The difference in the symptomatology lies in the difficulty in recognizing these symptoms. It is probable that pain is one of the earliest symptoms, as in adults, and it probably may be either dull or colicky. Of course infants, while able to show they have pain, cannot indicate in any way where it is. *Vomiting* is also a very constant symptom and its absence practically rules out an appendiceal lesion. It may or may not precede pain. There is nothing characteristic about the vomiting. Constipation is more common than diarrhea, but either condition may be present. There may or may not be moderate distension of the abdomen. The temperature is usually not much elevated. It may be nearly normal. If it is over 103 the difficulty is probably not appendicitis. There is almost always a polynuclear neutrophilic leukocytosis which may be slight, moderate or marked. Morse states that in his experience it has made very little difference either in prognosis or treatment as to how high the white count is. If the child is not in a serious condition and there is no leukocytosis, the chances are much against appendicitis. If the child is in a serious condition, the absence of leukocytosis does not count against appendicitis. The course of appendicitis is much the same in early life although changes are likely to occur more rapidly. General peritonitis may develop either with or without perforation. Perforation and peritonitis may come on insidiously or in the course of a few hours. With infants the symptoms of peritonitis are more likely to manifest themselves in an insidious manner and thus be overlooked.

PHYSICAL SIGNS

Regarding physical signs, tenderness at McBurney's point, if it can be elicited, is of diagnostic importance, but the appendix in childhood frequently lies deep so that tenderness and muscle spasm may be greater on the left than on the right side, or it may be deflected upwards. Where there is palpable resistance on the right side, in the presence of other symptoms, the diagnosis of appendicitis is to be strongly suspected. Rectal examination and if necessary examination under light anesthesia are mentioned again as often being helpful.

DIFFERENTIAL DIAGNOSIS

So far as differential diagnosis is concerned, suffice it to say that the condition is often confused with intussusception, intestinal obstruction, pleurisy, pneumonia, gastro-enteritis, pneumococcic peritonitis and other less common conditions associated with pain referable to the abdomen.

CONCLUSIONS

1. The possibility of appendicitis should be kept in mind regardless of age.

2. Appendicitis is a rare disease in the first year of life, somewhat more frequent in the second year, and gradually increases in frequency during the years of early childhood and young adult life.

3. Owing to indefinite symptoms, difficulty of careful abdominal palpation and failure to have the condition in mind, it is likely that many cases go undiagnosed during the first two years of life.

4. Abdominal palpation, together with white and differential blood counts, should be routine in all cases with symptoms of vomiting or abdominal pain. Rectal examination and examination under light anesthesia may be useful aids in making the diagnosis.

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THE REHABILITATION OF PATIENTS WITH INFANTILE PARALYSIS*

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The care of infantile paralysis illustrates in the fullest possible way the principles underlying orthopedic surgery, for in it attention must be paid to the prevention as well as treatment both of loss of function and of deformity in the locomotor apparatus.

In considering rehabilitation a distant view into the future has to be taken, a long campaign of treatment may have to be planned. Everything depends upon the early recognition and treatment of paralysis for which detailed anatomical and physiological studies are necessary. At the first possible moment, then, every case should be under the observation of an orthopedic surgeon. In planning for the future, assistance will be sought under the following heads:

1. The natural recuperative power of the locomotor system.
2. The proper application of physical therapeutic measures.
3. Retentive apparatus necessary for the prevention of deformity and for the more ready return of function.
4. Surgical procedures for reconstruction in late cases.
5. Psychological help through intelligent guidance and education.

In infantile paralysis the interest of the orthopedic surgeon commences with the onset of the disease, even in the preparalytic stage. In the *acute stage* (where there is paralysis with muscle tenderness), the most important orthopedic requirement is rest.

Painful paralyzed muscles must not be stretched or otherwise irritated. One must, therefore, guard the patient from such influences as gravity, vicious bed posture, the overaction of unparalyzed muscles and such misguided attention as electrical stimulation, osteopathy, chiropractic or physical therapy.

Paralyzed muscles must be relaxed. This means, for example, that if a muscle is a flexor of a joint, that joint must be held in flexion to give the muscle the best chance of recovery. Where single muscles are paralyzed it is easy to maintain such an optimum position, but where many muscles are involved a careful selection of joint positions must be made in order to concentrate upon getting return of function of the most important muscles. In general it may be stated that those muscles most concerned with opposition to the influence of gravity are the ones to which most attention must be paid. In the accompanying chart, a list is given of the chief joints and the positions in which they should be placed, in cases where there

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CHART NO. 1.

THE OPTIMUM POSITIONS FOR THE RETURN OF FUNCTION IN EXTENSIVE PARALYSES:

JOINT	POSITION	MUSCLES CHIEFLY RELAXED
Shoulder	Abduction 90° External rotation 90°	Deltoid Supra and infra spinatus
Elbow	Flexion 90°	Biceps and brachialis
Forearm	Supination full	Biceps and supinator
Wrist	Extension 40°	Extensor carpi rad. l. & b. Extensor carpi ulnaris
Fingers	Semiflexion (grasp)	
Thumb	Opposition	Thenar muscles
Spine	Recumbency with small support under lumbar region	
Hip	Abduction 45° Rotation neutral	Gluteus medius
Knee	Extension and flexion neutral <i>Almost</i> full extension (5° flexion)	Quadriceps
Ankle and foot	Dorsiflexion to 90° Neutral as to inversion or eversion Arches supported	

is extensive paralysis of opposing muscle groups.

ANATOMICAL AND PHYSIOLOGICAL
EXAMINATION

Before these positions can be decided upon, it is necessary that exact knowledge of the extent of involvement of the muscular system be determined. A detailed examination of muscles is made and is charted. Against each muscle on the chart is listed an estimate of its function, the criterion being its ability to act with or without the help of gravity. In the earliest stages this examination may be only approximately accurate on account of severe muscle tenderness. The extent of tenderness will give important clues as to the position in which the limbs are to be held and more accurate determination postponed until its subsidence.

METHODS USED FOR THE RETENTION OF THE
OPTIMUM POSITIONS FOR THE RETURN
OF MUSCLE FUNCTION

Every patient with acute anterior poliomyelitis must be in bed, and where there are extensive paralyses the positions already described may be temporarily maintained by very simple means. A bandage may be tied in a clove hitch around the wrist and the latter held to the head of the bed with the palm upwards and the fingers and thumb bandaged around a ball. This will take care of the upper extremity. The legs may similarly be tied to the sides of the bed, small pads resting under each knee, and the feet supported with pillows. The weight of bed clothes should be removed by cradles. More satisfactory apparatus must be provided as

soon as possible. Where there is severe muscle pain it may be necessary to apply a plaster mould. A bilateral hip spica is a very good method of relieving pain and holding position in the lower extremities. This may be bivalved and as soon as the tenderness begins to disappear the patient may be immersed in warm saline baths.

To facilitate nursing and to add to the comfort of the patient, the use of the Bradford frame as an adjunct to fixation is to be recommended. This is made of 1" gas piping, is 6" longer than the patient and is a little wider than the distance between the anterior superior iliac spines. Canvas is stretched across this metal frame in two sections leaving a gap at the level of the perineum 4 or 5 inches in width. The patient lies on his back on this frame, which is supported on wooden blocks. The arms and any overhanging apparatus are supported at the side with pillows. A similar anterior frame may be used so that the patient can be turned onto his face.

During the acute stage parts of the body that are not affected should be exercised under careful supervision and the patient given reassurance—this is especially important in the case of older children and adults.

THE SUBACUTE STAGE

As soon as muscle tenderness has gone, the stage of spontaneous recovery or subacute stage commences. It is at this time that the greatest value is to be obtained by physical therapeutic measures. During this period the same positions must be maintained that have already been described as the optimum ones for the return of func-

tion. A state of physiological rest is assumed by the patient, recumbency is maintained, all joints are mobilized, massage and muscle stimulation are employed, but, except for the regulated periods for treatment, apparatus is still kept in place in order to guard weakened muscles. Throughout this time educational and occupational recreation is of paramount importance.

One measure of the greatest therapeutic importance should be singled out for more detailed mention and that is hydrotherapy. The most readily available is the domestic bathtub; in addition, specially constructed swimming pools are used in some centers to great advantage. Water, especially if made hypertonic by the addition of salt, has a buoyancy that supports the limbs and enables movements to be carried out by weak muscles that would be impossible out of the water. This is an important thing in the earlier stage of muscle return, as the stimulus of movement is of great help in the reformation of the reflex arc that has been broken down. The beneficial action of heat may readily be combined with the brine bath—so that while muscles are acting their blood supply is increased by the improved circulation that is produced throughout the limb. At this point it is worth remarking that peripheral circulatory disturbances are very commonly present in infantile paralysis. We are all familiar with the cold blue extremities so frequently seen in the chronic stages of the disease. A large amount of this diminished circulation in a paralyzed limb is no doubt due to diminished muscle function and therefore lowered demand for blood supply—in other words due to inertia. A factor that would seem to have been largely overlooked, however, is the probable involvement by the infectious process of the nerve centers in the spinal cord affecting the sympathetic nervous system and its control of arterial pressure. Some such circulatory change may well be responsible for some of the periarticular contractures that occasionally develop so rapidly and insidiously during the acute stage of the disease. Cases may rarely be seen in which contractures and deformities develop that are quite unexplainable by the local muscular paralysis and which may closely resemble the changes seen in atrophic polyarthritis—a fact that may lend support to the view that some cases of polyarthritis have a large etiological

factor in neurovascular disturbances. Further discussion of this point is out of place at the present time and the subject is only mentioned as a suggestion for future work and to emphasize the important part played by circulatory disturbances in poliomyelitis and to stress the value of the therapeutic warm brine bath.

It is during the subacute stage that deformities must be prevented. While a few cases may develop periarticular contractures as just described, the most common cause for deformity is undoubtedly disturbed muscle balance; joints being pulled into fixed positions by unopposed active muscles. A drop foot or a flexion-abduction deformity of the hip may produce profound disturbances of the entire body mechanism. These deformities are practically entirely preventable if the points in treatment already discussed have been adequately attended to.

The only operative work that is necessary in the subacute stage is for the correction of such deformities that have been allowed to develop. Many of such deformities can be taken care of by simple manipulative methods, though occasionally a tenotomy may have to be performed.

TREATMENT OF THE CHRONIC STAGE

While much of the treatment in the acute and subacute stages must be left in the hands of the pediatrician and general practitioner, the chronic stage calls for all the ingenuity and skill that the orthopedist may bring to the problems that have to be faced. The procedures available fall roughly into three groups:

1. The correction of deformities
2. Stabilization of joints
3. Restoration of muscle balance around joints

The correction of deformities.—By the simple means of manipulation with or without anesthetic many soft tissue contractures may be overcome and correction maintained in plaster or other apparatus. For the more persistent conditions tenotomies and capsulotomies may have to be carried out. Structural bone changes in response to altered muscle function or other mechanical changes are not uncommon; such bony deformities may need correction by osteotomy, as for example in the knee for the correction of genu valgum. Atrophy of a limb with marked shortening is a deformity that

CHART NO. 2

UNIVERSITY OF MICHIGAN

UNIVERSITY HOSPITAL

INFANTILE PARALYSIS CLINIC						
Name	John Doe		Number	999999	Date	August 30, 1931
Cannot Walk	Walks unaided	With braces	Crutches	Corset		
Characteristic gait	Acute case brought to hospital on stretcher					
Scoliosis	None					
Left	<div>Contractions and Deformities</div> <div>Hip</div> <div>Ankle</div> <div>Knee</div>			Right		
None				None		
	N	Facial	Orbit	2		
	N		Mouth	0		
	N	Anterior Neck		N		
	N	Posterior Neck		N		
	N	Back		N		
	N	Quadratus Lumborum		N		
	0	Anterior Abdominals		0		
	5	Lateral Abdominals		N		
Left Leg			Right Leg			
	0	Gluteus Maximus		1		
	N	Hip Flexors		1		
	N	Tensor Fasciæ Latæ		N		
	3	Hip Abductors		0		
	1	Hip Adductors		N		
	0	Quadriceps		1		
	N	Inner Hamstrings		N		
	N	Outer Hamstrings		N		
	0	Gastrocnemius		N		
	N	Anterior Tibial		0		
	2	Posterior Tibial		4		
	N	Peroneals		N		
	N	Extensor Longus Digitorum		N		
	N	Extensor Proprius Hallucis		N		
	N	Flexor Longus Digitorum		N		
	N	Flexor Brevis		N		
	N	Flexor Longus Hallucis		N		
Measurements		Length				
	No change	Atrophy				
Advice	Lt. Hip in abduction and extension		Rt. Hip in abduction			
	Knee in almost full extension		Knee in almost full extension			
	Foot in plantar flexion		Foot in dorsiflexion and varus			
	Bilateral hip spica of plaster					
	Bradford frame					

CHART NO. 3
INFANTILE PARALYSIS CLINIC

Name	John Doe	Number	999999	Date	August 30, 1931
Left	Contractions and Deformities			Right	
	Shoulder				
	Elbow				
	Wrist				
	Fingers				
Left Arm	Anterior Deltoid		0	Right Arm	
	Posterior Deltoid		0		
Upper		Upper	N		
Middle	Trapezius	Middle	N		
Lower		Lower	N		
	Serratus Magnus				
	Rhomboids				
	Latissimus Dorsi		N		
	Clavicular Pectoralis Major				
N—Normal	Sternal Pectoralis Major				
1—Acts against gravity and resistance	Outward Rotators		0		
	Biceps		0		
2—Acts against gravity but not against resistance	Triceps				
3—Acts only if gravity is removed	Supinator Brevis				
4—Contracture of muscle insufficient to move joint when gravity removed	Pronators				
0—Complete loss of function	Flexor Carpi Radialis				
	Flexor Carpi Ulnaris				
	Extensor Carpi Radialis				
	Extensor Carpi Ulnaris		N		
	Flexor Profundus Digitorum				
	Flexor Sublimis Digitorum				
	Finger Extensors				
	Lumbricales				
	Dorsal Interossei				
	Palmar Interossei				
	Opponeus Pollicis				
	Abductor Pollicis				
	Thumb Flexors				
	Thumb Extensors				
Measurements	Upper Arm				
	Lower Arm Metal abduction brace for right upper extremity. Shoulder, 90° abduction, 90° ext. rotation; Elbow, 90° flexion; Wrist, dorsiflexion; Thumb, in opposition.				

has been the cause of much recent interest and various methods of bone lengthening have been employed, the most recent suggested by Harris of Toronto, who by producing prolonged hyperemia in a leg as the result of unilateral abdominal sympathectomy claims increased length of the limb to have resulted.

Stabilization of joints.—The operation most used for the stabilization of a joint is arthrodesis, in which all motion is eliminated by the production of bony fusion between the bones comprising the joint. The arthrodesis of a useless flail joint sometimes confers a benefit upon the patient that is to him almost akin to a miracle. This is perhaps demonstrated best in the case of the upper extremity where there is a flail shoulder. A remarkable improvement in function is obtainable (providing the scapular muscles and the forearm and hand are in good condition) if the shoulder is fused in the optimum position. This is 45° abduction, a little flexion and a few degrees of external rotation, in other words so that the hand may be held to the mouth; movement of the entire extremity now occurs between the scapula and trunk.

The condition of the hand may, in some cases, be improved if the carpal bones are fused to the radius with the wrist in a position of 30° dorsiflexion.

In the case of the spine, a paralytic scoliosis may be a great handicap. In the severe collapse of the spine that occurs, the spinal fusion operations of Hibbs or Albee or their modifications have great value. Not only may unsightly deformity be improved but the rigidity of the fused spine gives great improvement in strength, increased height is obtained, visceral function is improved and the patient is able to discard cumbersome and inefficient braces.

In the foot, arthrodesis has its greatest field of usefulness. In the mechanics of weight bearing and walking, stability is of greater importance than mobility. The elimination of movement in the inter-tarsal joints greatly assists weight bearing and walking in many paralytic feet. A great variety of procedures are available but the essential feature of most of them is the removal of side to side motion by arthrodesis of the subastragaloid joint (Davis's operation).

American orthopedic surgeons have done much for the surgery of the foot since Davis

first described the subastragaloid arthrodesis. Their names are conveniently used to distinguish certain procedures, *e.g.*, the Ryerson triple arthrodesis, the Hoke operation, the Campbell bone block, and the Whitman astragalectomy. One important feature of the latter is the more even distribution of body weight between the forefoot and hind foot. This is obtained by posterior displacement of the foot, under the tibia after removal of the astragalus. This procedure is of value in certain kinds of calcaneal foot but has been largely superseded in some clinics by the operation of the English orthopedist, Naughton Dunn, in which the foot is displaced backwards beneath the astragalus after removal of the scaphoid bone and part of the head of the astragalus.

Re-establishment of muscle balance.—This naturally is brought about largely by the transplantation of muscles from one side of a joint to another. In English speaking countries it is the custom to combine this as a rule with stabilizing operations. Especially is this true in the foot. An important principle to be observed before carrying out any muscle transplantation is that all deformity present in the involved joint must first be corrected. It is too much to expect a transplanted muscle to have any effect in the correction of structural deformities. In fact, such a deformity may completely vitiate the result of a transplantation.

In this country, the procedures most commonly carried out are, in the foot, transplantation of the peroneal muscles to the heel or to the middle of the forefoot for the calcaneal or equinus deformities respectively. One of the varieties of subastragaloid arthrodesis is usually combined with it. At the University Hospital we find the Dunn procedure of great value. If peroneal muscles are transplanted to the heel, the increased projection backwards of the latter gives better leverage for the transplanted muscles. If the peroneals are transplanted to the front of the foot this procedure provides a shorter forefoot lever and therefore less weight to be lifted each time the transplanted muscles contract.

Another muscle transplant performed is of the biceps femoris at the knee. This muscle is brought to the front of the thigh and inserted into the patella to take the place of a paralyzed quadriceps muscle.

At the wrist, the flexor muscles may be used to take the place of digital extensors. Here the operation may be combined with arthrodesis of the wrist. At the elbow the origin of the flexor muscles of the wrist and finger may be transplanted higher up the humerus in order to increase their influence as flexors of the elbow and thus assist a paralyzed biceps muscle.

All of these procedures require very careful anatomical and physiological study before they are carried out and demand prolonged after-care attention to obtain satisfactory results.

When to operate.—In the correction of deformity due to muscular contracture, manipulative treatment and the division of soft tissue structures by open operation if indicated, may be done at any time. Other work of a reconstructive nature must be postponed until it is quite clear that no further spontaneous improvement in muscle function is to be obtained by the non-operative methods. Furthermore, in children, the ability of the child to coöperate must be considered before performing tendon transplantation; and operations upon bones such as arthrodesis must be delayed until the ossification is well advanced. As a working rule it may be said that arthrodesis operations should not be done before the age of 8 years and

in some individuals should be left until a year or two later.

Meanwhile, when the stage of spontaneous recovery is over, ambulation of the patient is allowed with braces.

CONCLUSION

In general then it may be stated that every case of infantile paralysis demands, in its treatment, the coöperation of an orthopedic surgeon at the earliest possible date. Careful anatomical and physiological studies must be made if adequate measures are to be taken in the prevention of deformities and loss of function. In the re-education of paralyzed muscles, the most valuable physical therapeutic measure is the warm brine bath. In the acute stage, irritative physical therapy is to be condemned. The optimum position of joints for the return of muscle function is discussed and apparatus described for the retention of these positions.

In the later stages of the disease, operative treatment is used to correct deformities, stabilize joints and re-establish muscle balance. In doing this, orthopedic surgery aims at the removal of the stigmata of crippledness, at the production of physical independence on the part of the patient, to improve his efficiency and to diminish his suffering.

SODIUM AMYTAL IN THE TREATMENT OF TOXEMIA OF PREGNANCY

ROBERT KENNEDY, M.B., F.A.C.S.*

DETROIT, MICHIGAN

During the last year three cases of severe toxemia have come under my care which I wish to report. All were given daily administrations of sodium amytal; one which developed convulsions soon after admission was given avertin per rectum to control the convulsions, followed by the usual sodium amytal treatment of gr. 3 three times daily.

Case 1.—Mrs. v. D., aged twenty-two, was admitted to the Woman's Hospital, Detroit, May 8, 1931. She last menstruated Sept. 14, 1930. The estimated date of confinement was June 21, 1931. Para III. Her first pregnancy in 1927 ended in a spontaneous miscarriage at three and one-half months. Her second pregnancy in 1928 ended in a spontaneous miscarriage at three and one-half months. She believes both miscarriages were brought on by severe vomiting. Otherwise her past history was negative. On admission she gave a history of a severe headache and vomiting for the last twelve hours. On examination her blood pressure was: systolic 178, diastolic 120; urine showed 4 plus albumin with many hyaline and granular casts. There was considerable edema of

face, hands and lower extremities. The fetal heart tones were present and of good quality. The uterus and fetus were small for the duration of pregnancy (7½ months). The pelvic measurements were normal. A diet of low protein, salt-free, was ordered and sodium bromide gr. xxx and chloral hydrate gr. xv was ordered by rectum along with the usual routine treatment, which consisted of elimination and rest. Twenty-four hours after admission, the patient went into convulsions. She was given morphine in large doses with intravenous magnesium sulphate solution which failed to stop the convulsions. Avertin was then decided upon. By the time this

*Presented at the Michigan State Medical Society Meeting in Pontiac, Sept. 24, 1931.

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was prepared the patient had had five convulsions. A dose of 8.8 cubic centimeters was given per rectum in 200 c.c. of water as a retention enema. Within five to ten minutes the patient was asleep and had no more convulsions. In the morning she seemed much improved and a conservative line of treatment was agreed upon. The usual routine of elimination was adopted as to rest, diet, and increased fluid intake was carried out along with oral administration of sodium amytal gr. iii three times daily. The edema disappeared in about one week and the blood pressure and urinary findings are shown in the accompanying chart.

Mrs. v. D. Para III. Due June 21, 1931. Aged twenty-two.

Date	B. P.	Urine
May 9, 1931	178/120	4 plus alb. Hyaline and granular casts.
Five convulsions—given 8.8 c.c. avertin by rectum.		
May 10, 1931	140/118	
May 11, 1931	170/120	
May 12, 1931	160/112	Cath. spec. Alb. 0.104 per cent. Many hyaline and granular casts.
May 13, 1931	168/110	4 plus alb. Many hyaline and granular casts.
May 14, 1931	144/108	4 plus alb. Few hyaline casts.
May 15, 1931	130/98	4 plus alb. Few hyaline casts.
May 16, 1931	168/110	4 plus alb. Few hyaline casts.
May 17, 1931	132/100	4 plus alb. Occ. granular cast.
May 18, 1931	134/110	4 plus alb. Few casts.
May 19, 1931	138/108	4 plus alb.
May 20, 1931	136/100	3 plus alb.
May 21, 1931	144/110	3 plus alb.
May 22, 1931	142/104	3 plus alb.
May 23, 1931	140/98	1 plus alb.
May 24, 1931	148/96	2 plus alb.
May 25, 1931	138/102	1 plus alb.
Up in chair.		
May 26, 1931	138/104	3 plus alb.
May 27, 1931	148/98	2 plus alb.
June 1, 1931	115/72	2 plus alb.
June 4, 1931	100/68	2 plus alb. Hyaline casts
June 6, 1931	130/92	3 plus. Hyaline casts
Discharged.		
June 9, 1931	162/108	1 plus alb. Few casts.
Readmitted.		
June 11, 1931	152/118	1 plus alb. 20 W. B. C. to L. P. F.
June 13, 1931	150/104	2 plus alb.
Spontaneous rupture of membranes.		
June 14, 1931, in labor	160/118	3 plus alb. 100 W. B. C. to L. P. F.
Delivered, premature 3 lb. 15 oz.		
June 17, 1931	118/88	Cath. spec. 1 plus alb. Loaded with W. B. C.
June 24, 1931, 10 da. P. P.	122/76	Cath. spec. Trace alb. 30 W. B. C. to L. P. F.
June 29, 1931,	120/72	Voided alb. neg. Micr. neg.

The patient was allowed to go home on June 6, 1931, but was readmitted three days later with her blood pressure up. On June 13, 1931, the membranes ruptured spontaneously. Twenty-four hours afterward labor began and the patient had a spontaneous delivery of a female child weighing 3 pounds 15 ounces, which is now living and well. The mother made an uneventful recovery and was discharged in ten days. Blood pressure normal. Urine almost clear.

Case 2.—M. K., aged thirty-eight, Para I, was admitted to the Woman's Hospital, Detroit, May 24, 1931. Her last menstruation occurred Sept. 25, 1930. Labor was due July 2, 1931. She was married three years and was never pregnant before. Her past medical and surgical history were negative. On admission her blood pressure was systolic 190, diastolic 124, and urine showed 4 plus albumin. Edema of face, ankles and abdominal wall was very marked. The fetal heart tones were of good quality. The child seemed small, the estimated weight being 3½ lbs. Because of the size of the baby and the age of the patient, conservative treatment was decided on

in order to get a larger baby. The usual routine of elimination, rest, diet, increased fluid intake were carried out along with the oral administration of sodium amytal gr. iii, three times a day.

Mrs. M. K. Para I. Due July 2, 1931. Aged thirty-eight.

Date	B. P.	Urine
May 24, 1931	190/124	Alb. 4 plus. Many hyaline and granular casts.
Edema 2 plus. Rx. Intravenous Mag. Sulph. 20 c.c. 10 per cent. Sod. Amytal gr. iii t. i. d.		
May 25, 1931	182/114	Alb. 4 plus. Many hyaline and granular casts.
May 26, 1931	188/114	Alb. 4 plus. Casts 3 plus.
May 27, 1931	178/114	Alb. 4 plus. Casts 3 plus.
May 28, 1931	176/114	Alb. 4 plus. Casts 4 plus.
May 29, 1931	174/96	Alb. 4 plus. Casts 3 plus.
May 30, 1931	188/114	Alb. 4 plus. Casts 2 plus.
May 31, 1931	170/108	Alb. 4 plus. Casts 2 plus.
June 1, 1931	172/114	Alb. 4 plus. Casts 3 plus.
June 2, 1931	166/112	Alb. 4 plus. Casts 2 plus.
June 3, 1931	166/114	Alb. 4 plus. Casts 30 to L. P. F.
June 4, 1931	168/116	Alb. 4 plus. Casts 1 plus.
June 5, 1931	160/116	Alb. 4 plus. Casts 3 plus.
June 6, 1931	158/108	Alb. 4 plus. Casts 3 plus.
June 7, 1931	150/104	Alb. 4 plus. Casts—few.
June 8, 1931	152/110	Alb. 4 plus. Casts 2 plus.
June 9, 1931	156/100	

Low Cesarean Section—5 lb. 12 oz. child delivered.

June 10, 1931	150/100	
June 11, 1931	158/100	
June 13, 1931	160/102	Cath. Spec. Alb. 4 plus. Casts 3 plus.
June 19, 1931	148/104	Cath. Spec. Alb. 2 plus. Casts 2 plus.
June 21, 1931	144/96	

Discharged.

Aug. 1, 1931	132/78	Voided Spec. Alb. faint trace. No casts. 30 W. B. C. to L. P. F.
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The blood pressure gradually came down, the edema soon disappeared but the albumin in the urine remained the same, namely 4 plus. On June 9, 1931, sixteen days after admission, it was decided the child was large enough to live and a low cesarean section was done, when a female child three pounds 12 ounces was delivered. The child is now living and well. The mother made an uneventful recovery and was discharged on the twelfth day post partum. Six weeks post partum her urine still showed a faint trace of albumin but her blood pressure was normal for her age—132/78.

Case 3.—Mrs. H. L., aged twenty-seven, Para I, entered Cottage Hospital May 27, 1931. Last menstruation was on Oct. 27, 1930. Due Aug. 4, 1931. Six and one-half months pregnant. She had scarlet fever thirteen years ago. Her blood pressure 172/108. Urine showed 4 plus albumin. Marked edema of ankles. Fundus reached to navel. She was given the routine of diet, elimination, rest, increased fluid intake and sodium amytal gr. iii three times daily. Daily record of urine and blood pressure.

Mrs. H. L. Para I. Due Aug. 1931. Aged twenty-seven.

Date	B. P.	Urine
May 27, 1931	172/108	Alb. 4 plus. Granular casts 1 plus.
May 28, 1931	166/100	Alb. 3 plus. Granular casts 1 plus.
May 29, 1931	158/94	Alb. 3 plus. No casts.
May 31, 1931	160/95	Alb. 3 plus. No casts.
June 2, 1931	162/98	Alb. 4 plus or 0.35%.
June 4, 1931	160/100	Alb. 2 plus.
June 6, 1931	165/100	Alb. 2 plus or 0.22%.
June 8, 1931	170/120	Alb. 2 plus or 0.22%.
June 10, 1931	172/110	Alb. 3 plus.
June 12, 1931	158/98	Alb. 4 plus. Pus cells 2 plus.
June 14, 1931	165/102	Alb. 4 plus. Occ. pus cell.
June 16, 1931	170/110	Alb. 4 plus. No casts.
June 18, 1931	168/105	Alb. 4 plus. or 0.3%.
June 20, 1931	163/100	Alb. 4 plus. Micr. neg.
June 22, 1931	170/110	Alb. 4 plus or 0.3%.
June 24, 1931	162/104	Alb. 4 plus or 0.3%.
June 26, 1931	180/120	Alb. 4 plus or 0.33%.
June 28, 1931	175/110	Alb. 4 plus. Occ. pus cell.
June 30, 1931	178/108	Alb. 3 plus.
July 2, 1931	170/110	Alb. 4 plus or 0.3%.
July 4, 1931	182/118	Alb. 3 plus.
July 6, 1931	185/118	Alb. 3 plus. Occ. cast.

Labor induced by rupture of membranes.

July 7, 1931, during labor 203/140 Alb. 4 plus. Casts 1 plus. Delivered female child, weight 3 lbs. 12½ oz.

July 8, 1931	136/100	Cath. Spec. Alb. 1 plus. No casts.
July 11, 1931	170/120	Cath. Spec. Alb. 1 plus. Many R. B. C. and W. B. C.
July 14, 1931	150/100	Cath. Spec. Alb. 1 plus. Occ. pus cell.
July 16, 1931	148/100	Alb. trace. Occ. hyaline cast.
July 18, 1931	140/88	Alb. 1 plus. Occ. pus cell.
July 20, 1931	136/80	Alb. 1 plus. Many pus cells.
Discharged. Sept. 5, 1931	128/60	Alb. neg. Micr. neg.

Under this treatment her edema soon disappeared. She felt fine but the blood pressure remained high and the albumin still remained in the urine. After a stay of forty days in the hospital, and the pregnancy was past eight months, labor was induced by rupture of membranes. Within twenty-four hours patient delivered a premature child, weight 3 pounds 12½ ounces. During labor she was given sodium amytal gr. iii every two hours until she slept well between pains. No other anesthesia was used. Mother made an uneventful recovery, and two months later blood pressure was normal and urine clear. Child is now living and well.

COMMENT

In this small series of three cases of severe toxemia it will be noted the patients

were carried along from 15 to 40 days until we felt the child was large enough and mature enough to live. All the patients, although their blood pressure remained high and the albumin remained in the urine, felt very well, were free from headache and could not understand why they were being held in bed. Amytal should be superior to morphine as a sedative in these patients, since it is non-habit forming and can be given over a long period of time without injury to the fetus or mother. It is excreted by the lungs and throws no added work on the kidneys. Had not the sodium amytal been given could we have carried these patients along for this length of time? From the observation of such a small number of cases we do believe sodium amytal is of value, in preventing convulsions, in the treatment of toxemia.

RENAL TUBERCULOSIS WITH ANURIA DUE TO CALCULUS DISEASE*

GEORGE SEWELL, M.D.†

DETROIT, MICHIGAN

Nephrectomy for unilateral renal tuberculosis has become an established surgical procedure. Unfortunately the patients often do not present themselves early enough and the protean manifestations of the disease may make the diagnosis simple, or, on the other hand, one of the most baffling of urinary diseases. In these latter cases the exact diagnosis can often be made only after a long period of study and observation, bringing into use all the technical procedures at the command of the experienced urologist. Whilst early nephrectomy is advisable in those cases apparently proven unilateral, probably over half the cases ordinarily seen have evidences of bilateral involvement as proven by bilateral pyelograms, cultures and guinea pig tests from both kidneys, etc.

Although some surgeons have advocated the removal of the more actively diseased kidney in bilateral tuberculosis, a study of post-operative results in such cases shows the hopelessness of the situation. In this group of cases the use of heliotherapy by means of the carbon arc certainly tends to make life more tolerable and sometimes seems to arrest further progress of the disease.

Of those cases thought to be unilateral at the time of nephrectomy 15 to 20 per cent will die of uremic symptoms within three years. Thus the development of uremic

symptoms in a patient who has recently had a tuberculous kidney removed is usually taken to mean a rapid extension of the process to the other kidney and immediate death.

That such is not always true is evidenced by the following case report, which illustrates a case where the right kidney had been removed 6 months previous with pathological report proving tuberculosis and the other ureter became blocked by a calculus requiring ureterotomy. Subsequently the patient has passed three more small stones. Case No. 10492 came on the urological service at Herman Kiefer Hospital April 18, 1931, with a draining sinus in right lumbar region following a nephrectomy at another hospital some three months previous. Prior to the nephrectomy he had been under observation for about one month. His chief complaint at that time had been a constantly increasing weakness for the past several months, loss of 40 pounds in weight and extreme constipation. On close questioning a nocturia of once or twice was admitted. Because of the history of continued constipation proctoscopic examination had been made but was negative. Four days after proctoscopic examination patient suffered several severe chills with pyuria of about 100 cells per h.p.f. Cystoscopy was done but owing to in-

*Read at Herman Kiefer Hospital Staff Meeting, December 7, 1931.

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tense edema of bladder mucosa right ureter orifice was not located. Left ureter orifice was negative. Indigo carmine given appeared in normal time and with good intensity on left side but none appeared within twenty minutes on right side. Retrograde pyelogram made was not satisfactory, so intrave-

ing and of the patient's grave condition, immediate ureterotomy was done under spinal anesthesia. When the ureter was picked up it was found to be edematous and swollen to the size of the little finger, but not the hardened thick ureter characteristic of tuberculous ureteritis. Urine or serous exudate



Fig. 1. K. U. B. plate (taken at time of anuria) showing calcification around left sacro-iliac joint but no definite evidence of calculus.



Fig. 2. Two weeks later. Calcification is present; ureter catheter in ureter.

nous pyelogram after injection of uroselectan was done. This showed no kidney function on right side. A right nephrectomy was done in the usual manner—a large pyonephrotic kidney being removed. The pathological report was returned chronic tuberculosis.

On admission to our service his physical examination was essentially negative except for the draining sinus above mentioned and a slight tenderness noted in deep palpation over left kidney and left ureter.

Family History—No pulmonary or kidney diseases.

Industrial History—Has worked as a machinist for the past thirty years—a dusty and dirty trade.

Past History—Irrelevant. No known exposure to tuberculosis. Admits one attack of gonorrhea apparently without complications.

History by systems negative, except teeth show moderate dental caries and a few moist râles in apex of each lung are present. X-rays of lungs negative.

Under general carbon arc light treatments patient's general condition improved gradually and draining sinus healed.

After being in hospital about two months patient experienced the sudden appearance of colicky pains in left lumbar region extending around to scrotum. This was accompanied by chills and fever and the passage of a very small amount of bloody urine and patient rapidly entered a state of collapse, with anuria for three days, accompanied by nausea, vomiting and hiccough. Because of the acute onset of the symptoms a blockage by calculus was considered in spite of the fact that a flat plate failed to reveal any such evidence. Immediate cystoscopy was done. Bladder was inflamed and left ureter opening edematous—ureter catheter could be passed only for about 2 cm. up left ureter when a definite obstruction was encountered. Because of this positive find-

could be squeezed through its walls, so that obstruction was apparently present. The ureter was therefore incised and much urine immediately gushed forth. Owing to the extreme condition of patient it was not thought advisable to tarry too long attempting to find the stone. A catheter was inserted up the ureter and passage was free to the distance of the kidney pelvis. Another catheter was pushed downward toward the bladder and after meeting with some obstruction which easily gave way the lower ureter was thus opened. The post-operative course was uneventful and recovery from uremic symptoms immediate. Patient urinated through urethra on fifteenth day and ureterotomy wound completely healed in twenty-one days.

Three weeks later patient complained of not urinating for 24 hours so was immediately cystoscoped again. Bladder was covered with incruited cystitis—unable to pass No. 5 ureter catheter but after some difficulty a No. 4 was passed and was able to dilate to No. 5. A small stone was seen to be lying on base of bladder.

Urine specimen obtained from left kidney pelvis showed a pure culture of proteus vulgaris, agglutination with the blood positive 1-640. An autogenous vaccine was made from the proteus vulgaris culture and administered at three-day intervals for the next three months. Patient improved remarkably but complained of being unable to urinate if standing up but could do so with ease when lying down.

October 10, 1931. The stone was removed from bladder by means of cystoscopic rongeur. Patient could urinate in erect position as soon as tried a few days later.

The X-ray findings were as follows: Lungs negative on several occasions. K. U. B. ray—"Right kidney not seen. Left kidney well outlined appears to be a little larger than normal. There are dense calcifications in the region of the left sacro-iliac joint.

They do not resemble calculi." On every plate this calcification was seen and the obstructing calculus of the ureter did not show on the X-ray plate. About six weeks after the ureterotomy a left pyelogram made appeared normal.

Blood counts were normal, Wassermann negative, Vernes Test for tuberculosis 4 plus.

Urinalyses showed pus cells repeatedly with occasionally a trace of albumin, but failed at any time to show the presence of the tubercle bacillus.

SUMMARY

1. A case of anuria due to blockage of the remaining kidney present is reported in which the other kidney had been previously removed for tuberculosis. Blockage was due to ureteral calculus.

2. Calcifications evident around the sacro-iliac joint appeared the same before and after the removal of the stone.

3. The patient has subsequently passed several stones with no apparent change in the calcifications.

4. Pure cultures of *proteus vulgaris* were obtained from the urine and patient's clinical progress seemed to be helped by the use of an autogenous vaccine.

5. The occurrence of uremic symptoms some months after nephrectomy for urinary tuberculosis does not always portend a fatal issue due to involvement of the other kidney but may mean obstruction to the remaining kidney. This can be diagnosed by immediate cystoscopy with ureteral catheterization and, if obstruction to catheters is present due to stone, should be relieved by immediate operation.

1116 DAVID WHITNEY BLDG.

DR. RICHARD R. SMITH HONORED

A complimentary dinner was tendered Dr. Smith of Grand Rapids by the Fifth Councillor District of the Michigan State Medical Society as announced, on January 14, 1932. Dr. R. H. Dunham, President of the Kent County Medical Society, after a brief address complimentary to the guest of the evening, introduced Dr. B. R. Corbus, chairman of the council of the Society, who in turn presented Dr. Carl F. Moll, President of the Michigan State Medical Society. Dr. Moll complimented the governor on the wisdom of the appointment made in the way of a successor to the late Dr. W. H. Sawyer, as Regent of the University. He assured Dr. Smith, the newly appointed Regent, of the loyalty and support of the State Medical Society.

Dr. Corbus as toastmaster spoke of the splendid professional career of the newly appointed Regent and of his influence upon medicine and surgery, not only of Grand Rapids but also of the state. On being introduced Dr. Smith responded with an interesting address on the Privileges and Responsibilities of the Doctor Today.

"I want to thank you," said he, "for this demonstration of your goodwill and friendship. I want to thank each and every one of you for coming here tonight to this dinner in my honor. I am indeed most grateful. I want to thank the Council of the State Society and its committee for the time and effort they have given to arranging it all. Particularly do I wish to thank Dr.

Corbus, our District Councilor and toastmaster, who was so good as to initiate the plan and who has been most eager and persistent in carrying it out. I want to thank President Ruthven, Dr. Marshall, Dr. Robb and Mr. Wishart for the compliment they have paid me in coming here tonight to grace this occasion and to contribute in speech so vitally to the success of this occasion. (Regents.) Our Toastmaster and Dr. Denham and Dr. Moll have been most kind in what they have said of me. It gives me a thrill, and I believe a pardonable sense of gladness, that after all these years of practice among you I can be here tonight to listen to so many kind and complimentary things.

"At the time that Governor Brucker conferred upon me the great personal honor of appointing me to the Regency of the University, quite the greatest honor that has ever come to me, I was aware that I was appointed largely because I was a representative of a profession that has, and is contributing a great deal to the welfare of the people of Michigan. It was a fitting recognition by Governor Brucker of the importance of the work that you are doing. Since the medical school is a vital part of the University I am especially pleased that a representative from the medical profession was appointed to fill the vacancy created by the passing of Dr. Sawyer, a most wise counselor and a man who gave without stint of his time and energies to the welfare of the Uni-

versity and the medical school. It was due in no small way to the hearty and loyal cooperation of Dr. Sawyer that the medical school continues to occupy the place which it now occupies among the medical schools of the country. I am only hoping that I may be able to fill his place with some sort of credit to you, the members of the medical profession, the people of the State of Michigan, the University, and the President and Board of Regents of that great institution.

"I hope I may be pardoned if on this occasion I speak about some of the fundamentals of medical practice. I have been in practice now a good many years and have necessarily acquired certain viewpoints. Too often in the midst of daily duties and many annoyances we cannot, so to speak, and to quote a familiar saying—too often we cannot see the forest on account of the trees.

"The life of a doctor is one richly endowed with privileges. Of all the splendid services performed by man for his fellow men, the service of a doctor stands out unique, valuable beyond estimation, and satisfying to him who performs it. It satisfies the mind and it satisfies the heart, and every urge that one has to be useful. Men in other callings are often diverted from them. Lawyers leave their profession to go into business; a business man often sells furniture one year and the next year he is selling vacuum cleaners. The doctor rarely changes. Once he has put his shoulder to the wheel he continues to the end. He is in love with his work and it carries him along through many a trial and disappointment. It is an anchor in time of trouble. He shares with the clergy a place in the hearts of people accorded to no other profession or calling. To be able to render the service he does is his greatest privilege.

"He is following a calling alive with scientific interest. Medical science has engaged some of the finest minds that the world has produced. Here is a field in which one may find an outlet for every intellectual effort of which he is capable. Stories of the great discoveries in medicine are found in the lives of our great masters, and are full of drama and even romance, of ingenuity, courage, patient persistence and conquest. Could there be any novel more entertaining, any story of adventure more thrilling than the account of the discovery of the cause of yellow fever, leading at once to a nearly

complete eradication of this dread pest from the western hemisphere? There are few Pasteurs, Listers, Oslers or Mayos, but to each and every one of us these opportunities in smaller ways are open. Always there are new fields to conquer. Progress in medicine is noted by a thousand contributions, and each one of us may add a little if he so wills.

"There is open to the doctor a magnificent literature. Text-books and monographs that tell us of what has been accomplished, and hundreds of periodicals alive with new ideas, and fresh discoveries, reflecting a reaching out toward that ever receding day when we shall know all there is to know about the human body. I can hear somebody saying this a thousand years from now. We have splendid libraries, and books and periodicals can be acquired for a pittance in comparison with their real value. I know of no profession more splendidly equipped in this respect. It is indeed a great privilege. We have our medical society meetings, where we may gather to discuss and learn, as no man can advance all by himself. Here also we make our contacts with, and acquire, our friends in the profession. It is indeed a privilege. The doctor of today has at his command hospitals, laboratories, convenient offices, assistants, nurses and lay workers, all there to facilitate his work and to improve its quality. What a great change in thirty years. These things are taken as a matter of course by the younger men, and more deeply appreciated by those of us who have been obliged in former years to practice without them.

"Among a doctor's privileges is a certain independence which the life affords. There is ever opportunity for self advancement and for satisfying one's initiative. We are seeing a gradual socialization of medicine. How far it will go who can say? We are fearful of this, and among our many reasons I believe that above all stands the fear of losing this independence and with it our opportunities for self development and the exercise of our initiative. We may be sure of one thing, however, that by hook or crook eventually the public is going to demand and obtain good medical service, and that whatever the economic conditions under which we practice, the doctor will remain the keystone in the arch of such medical service. We shall have a place in the sun.

"Doctors have many other privileges, but

these are the only ones that I can think of just now. For fear that some of our lay guests may think that the life of a physician is one of unalloyed joy, I hasten to say that it is one of very grave responsibilities in keeping with the importance of his work, and these responsibilities weigh heavily upon the physician at all times. We are not engaged in selling merchandise, nor dealing with commercial values, but we are entrusted with precious human lives. We are not in a business, we are in a profession. Much depends upon our actions, and mistakes may be costly. Keen concentration upon our work, and everlasting vigilance are necessary to success, and the burden is at all times a heavy one. The responsibilities of doctors are growing heavier, not lighter. Much more may be done for patients than formerly. There is call for greater knowledge and greater skill. So many details must be carried out that formerly were not required, and disease must often be detected in its earliest stages in order to correct it. Doctors pay heavily for the privileges which they enjoy. They have their full share of troubles of all kinds. If I should begin to enumerate them I am afraid that I should bring you all to tears, and I should not like to see our lay guests here tonight witness your weeping.

"Progress in medicine is rapid. Each year are presented innumerable new ideas. Add a fact or two, change the viewpoint, and there is born a new truth. The well posted man of today is in a few years hopelessly behind, unless he keeps constantly in step with progress.

"Many personal qualities seem essential to success in practice. Energy, hard work, determination, a personality that inspires confidence in patients, and certain attributes of heart, but I am impressed as the years go on that practice is drifting more and more to the men who have knowledge and skill and know how to apply them. One cannot succeed eventually unless he cures or benefits his patients. Osler was known for his superb qualities of heart, his kindness, sympathy and understanding. He was one of the most beloved physicians of his day, but this is not what made Osler the great physician that he was. It was his keen intellect, his profound knowledge of medicine, his ability to impart that knowledge by text and speech to others, and a skill in applying what he

knew (a superb art) to the diagnosis and treatment of his patients. These last are the things upon which we must rely more and more as time goes on.

"Graduates of today are infinitely better prepared for their life work than ever before. Improvement has been gradual and very great. A good foundation in medicine is becoming more and more essential to success. The responsibility placed upon a medical school is an ever increasing one. Much was done for medicine when early in the century the Rockefeller Foundation divided medical schools into A, B and C grades, for it at once did away with most of our unworthy medical schools which were pouring out thousands of doctors a year upon a helpless public. A medical school is worthy just so far as its graduates can serve the public. Among its objectives, that should ever stand first. Here in Michigan we are anxious that the men who in time are to replace us in practice should be well grounded and we may well lend our support to our medical school and hospital for this purpose, and now I am talking of our medical school. Aside from the teaching of undergraduates the school offers splendid courses in graduate study. Some stay after graduation and become assistants and acquire special training. They often become the superior men in different localities.

"I wish I had time to speak more fully of the opportunities now open to doctors of the state in post graduate work. Under the skillful guidance of Dr. James D. Bruce it has already gained a considerable headway.

"Graduation in medicine is but the beginning of a life of study and advancement in knowledge and skill. The opportunities we have are in most respects well developed. Opportunities for post graduate work at our great medical schools are still comparatively undeveloped, but they are slowly improving. I can visualize the time when the facilities for teaching will have advanced to a point where every practitioner of medicine in Michigan, specialist or otherwise, will be spending a month or more of his time each year or two at our University or at one offering similar superior advantages. When that day comes we shall be able to render a still better service to the patients that we serve."

The next speaker was Dr. W. H. Marshall of Flint, who took as his subject,

The General Practitioner. Dr. Alexander G. Ruthven, president of the University, spoke on the Super-University, indicating the ever increasing service the institution endeavored to render. Dr. J. M. Robb of Detroit, president-elect of the Michigan State Medical Society, spoke on the subject of the Growth of Specialism. The final address

was by Dr. Alfred W. Wishart of Grand Rapids.

The demands upon space in this number of the Journal render it necessary to defer publication of two of these excellent and timely addresses to future numbers of the Journal. The Journal has already commented editorially on Dr. Smith's appointment as Regent.

FAMOUS MEN IN MEDICAL HISTORY

JOHN SHAW BILLINGS

By HENRY J. FAUL

The history of the world shows that at certain epochs men are raised up to do great and needed work, to evolve order out of chaos, to direct and guide, with unfaltering courage and unerring judgment, purposes, and events, to gather about them co-workers trained, strong to assume responsibility, equipped for great undertakings and loyal ever in the pursuit of duty. Thus came Dr. John Shaw Billings into the days of the formative period of progress in the medical profession, to lay the foundation on which its development and growth in the future were to be builded.

John Shaw Billings was born in Cotton township, Switzerland county, Indiana, April 12, 1838, a part of the country which was sparsely settled at that time. The greater part of his boyhood and youth was spent in Indiana, but during his first ten years his family successively moved to Indiana, New York, Rhode Island, and at the age of ten years back to Indiana, where his father kept a country store in Allensville, and here young Billings lived until he left home for college.

It was a pioneer community. Along the Ohio river men worked as boatmen, artisans, merchants; back from the river stretched farm lands. With its New England traditions the Billings family counted books quite as necessary household equipment as tables, chairs, or clothing. The mother was a persistent reader. In later years when the Billings family lived in Dayton, Ohio, she was one of the most regular patrons of the Dayton library, reading constantly and widely, apparently enjoying biography, fiction, travel, and philosophy

equally well. Many of her traits were reflected in her son.

We can gather a glimpse of his character from a biographical essay he made in later life:

"When I was about ten years old, my father moved to Indiana and established himself in a little cross-roads village called Allensville, on the road from Rising Sun to Vevay. Here he kept a country store—was postmaster, and had a small shoemaker's shop in which one man was employed. I learned something of shoemaking—had some experiences in keeping store. I read incessantly. Came across a book—I have forgotten its title—which had a number of Latin quotations in it, asked a young clergyman (Mr. Bonham) how I could learn Latin—and got a Latin grammar and reader—a copy of Cæsar, and a Latin dictionary, and set to work. It was difficult, but with the aid of Mr. Bonham I made good progress. Then I made an agreement with my father that if he would help me through college, in the least expensive way, all of his property should go to my sister, and that I must expect nothing more. I then got some Greek books, a geometry, etc., and went on to fit myself to pass the entrance examination for the sub-freshman class at Miami University, Oxford, Ohio. I succeeded in doing this in a year—and passed the examination in the fall of 1852. For the first two years I kept bachelor's hall, living on bread, milk, potatoes, eggs, ham; such things as I could cook myself. The lessons gave me little trouble. Most of my time was spent in reading the books in the College Library. I was omnivorous, read everything in English as it came, philosophy, theology, natural science, history, travels and fiction."

Billings graduated from Miami in 1857 with the second honor in his class. He planned to study medicine but had to wait a year till he earned money enough for the medical school. The summer of '57 was spent in traveling with an itinerant showman, and by this means and by tutoring he earned and saved money enough to enter the Medical College of Ohio, at Cincinnati, in the fall of 1858. He had very scanty

funds and thus had to practice severest economy. In referring to this part of his life, Dr. S. Weir Mitchell said, "Of these years of privation he spoke to me once or twice, with assurance of his belief that he never recovered from the effect of one winter in which he lived on seventy-five cents a week, subsisting chiefly on milk and eggs."

He described his medical college experience as follows in a speech long years afterward:

"I graduated in medicine in a two-years' course of five months lectures each, the lectures being precisely the same for each year. I had become a resident in the hospital at the end of the first year's studies. There was I a resident of the City Hospital of one hundred and fifty beds, where I was left practically alone for the next six months, the staff not troubling themselves very much to come during the summer time, when there was no teaching. In those two years I did not attend the systematic lectures very regularly. I found that by reading the text-books, I could get more in the same time and with very much less trouble. I practically lived in the dissecting room and in the clinics, and the first lecture I ever heard was a clinical lecture. The systematic teaching of those times I have had to unlearn for the most part. There is a new chemistry, a new physiology, a new pathology. What has remained is what I got in the dissecting room and in the clinics."

The medical college required a graduation thesis from all its candidates for a degree. The surgical treatment of epilepsy was the subject chosen by Billings and it was the preparation of this thesis which led him to see the necessity of an index to the literature of medicine, and it was the fulfillment of this vision which led him to accomplish his monumental work in the Surgeon General's Library years after. This interesting experience is adequately related in his own words:

"In the thesis just referred to, it was desirable to give the statistics of the results obtained from certain surgical operations as applied to the treatment of epilepsy. To find these data in their original and authentic form required the consulting of many books, and to get at these books I not only ransacked all the libraries, public and private, to which I could get access in Cincinnati, but for those volumes not found here (and these were the greater portion), search was made in Philadelphia, New York, and elsewhere, to ascertain if they were in any accessible library in this country.

"After about six months of this sort of work and correspondence I became convinced of three things. The first was, that it involves a vast amount of time and labor to search through a thousand volumes of medical books and journals for items on a particular subject, and that the indices of such books and journals cannot always be relied on as a guide to their contents. The second was, that there are, in existence somewhere, over 100,000 volumes of such medical books and journals, not counting pamphlets and reprints. And the third was, that while there was nowhere, in the world, a library which contained all medical literature, there was not in the

United States any fairly good library, one in which a student might hope to find a large part of the literature relating to any medical subject, and that if one wished to do good bibliographical work to verify the references given by European medical writers, or to make reasonably sure that one had



JOHN SHAW BILLINGS

before him all that had been seen or done by previous observers or experimenters on a given subject, he must go to Europe and visit, not merely one, but several of the great capital cities to accomplish this desire.

"It was this experience which led me, when a favorable opportunity offered at the close of the war, to try to establish, for the use of American physicians, a fairly complete medical library, and in connection with this to prepare a comprehensive catalogue and index which should spare medical teachers and writers the drudgery of consulting ten thousand or more different indexes, or of turning over the leaves of as many volumes, to find the dozen or so references of which they might be in search."

The year after his graduation he became a demonstrator of anatomy in his medical school, and on the knowledge acquired in this capacity was built his work as a surgeon in later years.

When the Civil War broke out Billings was considering a partnership with Professor George C. Blackman, but he gave up this

promising surgical career to enter the army as a surgeon.

In the fall of 1861 Billings was given his examination for admission to the Medical Corps of the United States Army and passed first in the list of candidates. He was appointed first lieutenant and assistant surgeon, and was placed in charge of Cliff-bourne Hospital at Georgetown, D. C., which he developed into one of the most important of the army hospitals surrounding the Federal capital. At this time Dr. Billings met in Georgetown his future wife, Miss Kate M. Stevens, a daughter of Hon. Hester L. Stevens, a native of Rochester, New York, who settled in Pontiac, Michigan, became a prominent lawyer, later representing Michigan in Congress. Dr. Billings and Miss Stevens were married a year later, on September 3, 1862.

Four years of active service in camps and hospitals were crowned with the reward of a brevet lieutenant-colonelcy in the regular army, and the position of medical inspector to the Army of the Potomac, the rank and the honor coming in recognition of "faithful and meritorious services," bestowed by governmental order. In the great battles of the war, Chancellorsville and Gettysburg, he was in the midst of the fighting, exposed to rifle and artillery fire, engaged in the duty of caring for the sick and wounded, fearless of the dangers which surrounded him. As an operating surgeon he performed many operations of major character, including amputations and excisions, trephining and operations for gunshot wounds of the head and pelvis, in fact about all that was usually done in the pre-antiseptic period. He was the first surgeon in the war to attempt the unusual operation of excision of the ankle joint which had been done only two or three times before in the history of surgery, and was successful in his case.

His many letters to his wife tell frankly the story of his daily life, his companions, his hopes and fears, and often enough of his privations. On one occasion he writes, "Drew pay, which came just in time, as I was reduced to ten cents." Yet he has the courage still to say, "I believe all will prove best for us in the end and that both you and I, in the years to come, will be glad and proud that I was in this campaign."

In December, 1864, he was assigned to the Surgeon-General's office, where he remained until his retirement thirty-one years

later. The library at this time contained a little over 1,000 volumes, a considerable increase over the small collection of books which was the beginning of the Surgeon General's library sometime prior to 1836. We see a slow growth of this collection before the advent of Dr. Billings. In less than a year after Dr. Billings' assignment to the library the collection comprised 2,253 volumes. From 1865 the growth of the collection was due to the fact that the Surgeon General was permitted to use for this purpose a "slush fund" of \$80,000 turned in from the Army hospitals at the close of the Civil War, and is indicated by the printed catalogues of June 12, 1868, containing 2,887 entries (6,066 volumes), and of 1871, including 13,330 volumes.

Between 1865 and 1887, the Army Medical Museum was, in effect, the old Ford's Theatre, in which President Lincoln was assassinated. The Surgeon-General's office proper, during this period, consisted of a series of rooms over the old Riggs' Bank. Here, among other official business, all new accessions in the way of books, pamphlets, and theses were ticketed and catalogued, after which they were sent to the Library hall in the Ford's Theatre, which was then in charge of Dr. Thomas A. Wise. So small were the accommodations over Riggs' Bank that the newly arrived boxes of books and theses had to be opened in the back yard.

In 1876 Dr. Billings published a Specimen Fasciculus of a Catalogue of the National Medical Library, which was submitted to the medical profession for criticisms and suggestions. In style and arrangement, this publication is practically identical with the present Index Catalogue, differing only in certain typographical details. The index of authors and subjects is arranged in dictionary order in a single alphabet, the articles indexed from periodicals are printed in alphabetical order in nonpareil type, and the larger subjects, *e.g.*, Abdomen, Abscess, Acids, etc., are carefully subdivided. At this time, the Library contained about forty thousand volumes and about the same number of pamphlets. As we see it now, the arrangement seems very simple, sane, and satisfactory. This solution of the problem was not so obvious, however, fifty-five years ago, and Billings reached it only after prodigious labor, countless experiments, careful consideration of the opinions and

suggestions of others, constant thought on his own part.

Necessary appropriations for the Library were made by Congress, upon which its collection of books gradually expanded from year to year up to its present status of over half a million volumes. But Dr. Billings did not rest content with appropriations. By means of gifts and exchanges and by ransacking such private collections as were generously thrown open to him he labored indefatigably towards completing his collection. Oliver Wendell Holmes, describing a visit of Dr. Billings to his private library in Cambridge, told how he came into the room, looked around, darted at a book which was the most valuable volume on the shelves, examined it, replaced it, took another survey, and made tracks for a second book which was the second most valuable book in the collection. Holmes with a twinkling eye added, "Why, Sir, Dr. Billings is a bibliophile of such eminence that I regard him as a positive danger to the owner of a library if he is ever let loose in it alone."

After the publication of the Specimen Fasciculus Dr. Billings, with the able assistance of Dr. Fletcher, who later carried on the work of Dr. Billings after his retirement, worked steadily at preparing the copy of the prospective Index Catalogue for a period of four years, until Congress made the appropriation for printing it in 1880. It was a massive volume of 888 pages. Upon its publication, the catalogue was gradually sent out to universities, laboratories, medical and public libraries, boards of health, and to physicians specially interested in scientific medicine. The reception by the medical profession and the organs of opinion in Europe and America was flattering in the highest degree; and its appearance marked an epoch in the development and improvement of medical literature. Editors of medical journals, chiefs of clinics and laboratories, and physicians writing upon all branches of medicine, who formerly had to obtain historical, statistical, and other data in the most haphazard way, now had their material ready to hand in the most convenient and accessible form possible.

Other volumes of the Index Catalogue followed year by year with extraordinary regularity, the first series of sixteen volumes, each of nearly 1,000 pages, completing the alphabet in 1895, just as Dr. Billings was retiring from the army. The second

series was carried on by his successors, and the alphabet was finished with volume 21 in 1916, at which time the library contained 224,522 volumes and 337,120 pamphlets, 561,642 pieces in all.

The Index Catalogue, Dr. Billings always insisted, was not a medical bibliography, but merely an index to a particular collection. However, Sir William Osler declared at the memorial meeting for Dr. Billings that, "while the Catalogue only represents the contents of the Surgeon-General's Library, it really is an exhaustive index of medical literature. So general were Dr. Billings' interests that all departments of medicine are represented, and there is not a subject, as there is scarcely an author of note, ancient or modern, not in the catalogue. It has in high degree the two essentials of a good bibliography—comprehensiveness and accuracy. Taking the two series for reference purposes there has never been issued a work so generally useful to the profession."

In addition to the Catalogue Dr. Billings with Dr. Fletcher conceived the idea of a monthly index, which would give to physicians a classified record of the current medical literature month by month, a publication also of the greatest value to medical students. The first monthly number of this publication was issued on January 31, 1879. The Index had a constant struggle for subsistence after its origin. Several publishers undertook the project, lastly Dr. Fletcher himself, but he could not carry the burden and it was discontinued in 1898. In 1903 the Carnegie Institute of Washington took it up as one of the first of its publishing enterprises, with Dr. Fletcher as editor-in-chief; it has continued to benefit the medical profession up to the present time.

It is said of Dr. Billings that the three great things in his life after the war were the development of the Surgeon-General's Library and its catalogues, the planning of the Johns Hopkins Hospital, and the directorship of the New York Public Library. Any one of these tasks would have satisfied a normal man. But Dr. Billings was a genius, a man with an unlimited fondness for work, the faculty of accomplishment without apparent effort, a refusal to be balked at undertaking a task because it seemed too large or the end too remote. What came to hand was done well, with an originality and finality that encouraged the suggestion of further tasks.

In 1876, the same year that Dr. Billings published the *Specimen Fasciculus*, he was selected by the Trustees of the Johns Hopkins Fund along with four other eminent physicians to prepare essays regarding the best plans to be adopted in the construction and organization of the hospital for which Johns Hopkins had provided the largest gift of money which had been made up to that time for such a purpose. His essay was chosen as the best, and from 1876 to the opening of the hospital in 1889 he acted as the highly efficient medical adviser of the trustees of the Johns Hopkins Hospital, whose confidence he enjoyed in the highest degree.

Dr. Billings' interest in hospital construction can be traced to his experiences as a surgeon in the Civil war, in the course of which there was developed a new style of building hospitals, consisting of a central administrative building with barrack-like pavilions, either detached or connected by corridors. In the publication, if not in the origination, of this method of hospital construction, known in Europe as "the American system," Dr. Billings had the largest share through his valuable report on "Barracks and Hospitals," published in 1870, and through his work in planning and describing hospitals, especially the Johns Hopkins Hospital.

All the details of Dr. Billings' views and plans for the Johns Hopkins Hospital are too numerous and lengthy to discuss here but it is of interest to us all to relate a few of the outstanding specifications which marked such a new era in hospital construction and organization. He stated that the administration of the hospital should be upon the military or railroad plan, that is, under one head and only one; that it should have first-class physiological and pathological laboratories, a dispensary for out-patient relief, and that this department should be connected with the building set apart for the instruction of students and separated from the administration buildings; that clinical instruction should be mostly given in the wards and out-patient department and not in an amphitheatre, except in the surgical unit; that medical cases should not be brought from beds to an amphitheatre; and that a perfect system of records—financial, historical, and clinical—should be kept. He laid special stress at the start on the necessity of a medical school

of much higher status than had hitherto existed in this country, providing liberally for the accommodation of resident students. Recommendation was also made for publication of annual volumes of reports, like those of Guy's or St. Bartholomew's Hospitals. He considered the question of obtaining the best men for the hospital. This he believed is accomplished not by attractive salaries but by offering every possible facility for scientific experiment and observation, and then having secured the best men obtainable it was necessary to "keep them good," and this latter was proposed to be obtained by giving ample room to "provide nutriment and space just as certainly as we must provide for the trees that we propose to plant, or else expect stunting, impaired vitality and absence of fruit." The classes, he insisted, should be small, that the whole of the graduating class should be employed in the hospital, that this number cannot exceed twenty-five, making the maximum number of students about one hundred twenty.

After writing his essay Dr. Billings went to Europe in company with Dr. Ezra M. Hunt, a sanitarian, to study hospitals and their construction.

The work having begun on the hospital in May, 1877, Dr. Billings presented a full report on the system of heating and ventilation to be adopted, which was specially devised to be suitable to the climate of Baltimore and the peculiar location and plan of the hospital. Dr. Billings' "Description of the Johns Hopkins Hospital," was published in 1890 and became a kind of text-book on the subject of hospital construction and ventilation.

During the years of construction the members of the medical and surgical staffs were selected. The first of these was that of Professor William H. Welch to the chair of pathology in 1884. This important selection was made largely at the instance of Dr. Billings and Professor Julius Cohnheim. In 1888 Dr. Billings again selected wisely, in the appointment of Sir William Osler as Physician-in-chief. Dr. Osler relates:

"An important interview I had with him illustrates the man and his methods. Early in the spring of 1889 he came to my rooms in Walnut St., Philadelphia. We had heard a great deal about the Johns Hopkins Hospital, and knowing that he was virtually in charge, it flashed across my mind that he had come in connection with it. Without sitting down, he asked me abruptly, 'Will you take charge

of the Medical Department of the Johns Hopkins Hospital?" Without a moment's hesitation I answered 'Yes.' 'See Welch about the details; we are to open very soon. I am very busy today; good morning,' and he was off, having been in my room not more than a couple of minutes."

In 1889 the Johns Hopkins Hospital was formally opened, and by 1893 the Medical School was in full swing, and its faculty soon established a well deserved reputation, at home and abroad, for original scientific work. To quote Dr. Fielding H. Garrison:

"Billings was a true prophet. All the fine things he had predicted for the hospital, twelve years before its completion, came to pass in time.

"With Eliot of Harvard and Pepper of Philadelphia, Billings will always be remembered in our medical history as one of those who have dared greatly and achieved greatly for the advancement of higher medical education in this country."

Dr. William Pepper, provost of the University of Pennsylvania, drew up an agreement with Dr. Billings, in 1889, with the approval of the Surgeon-General, to serve as director of the University Hospital, to take the chair of hygiene, to plan a laboratory of hygiene, and on completion of the Index-Catalogue to request retirement from the Army that he might give his entire time to academic work. Dr. Billings began to lecture on hygiene and vital statistics at the University of Pennsylvania during the academic year 1891-1892; and these lectures continued till he retired from the Army, after which he became full professor of hygiene at the University, having previously planned and opened its Laboratory of Hygiene on Washington's birthday, 1892. Original investigations on the influence of light and other agents on the typhoid and colon bacilli, on the bacteria of river waters, and on the composition of expired air and its effects on animal life were suggested and supervised by him while director of the laboratory of hygiene. However, his term of full professorship lasted for only one year, for in 1896 he became the Director of the proposed Public Library at New York, not because he was in any way dissatisfied with the former position, but because he believed that he could best contribute to the public good by undertaking the New York work. A new and final chapter, perhaps the greatest chapter in his life, was to open.

In 1839 John Jacob Astor bequeathed \$400,000 for the erection and management of a public library for the City of New York. Later additional sums were given by William B. Astor and his grandsons. In 1870 James

Lenox, a wealthy New Yorker, gave land, a library building and books, amounting *in toto* to two million dollars. Upon the death of Samuel J. Tilden in 1886 more than two million dollars were bequeathed to establish and maintain a free library and reading room in the City of New York, as a third benefaction to the City. These three libraries were established but all were in an identical situation; they had the best of intentions but inadequate funds. Mr. John L. Cadwalader of the Astor Library and Mr. Lewis Cass Ledyard of the Tilden Trust, realizing the hopeless situation of their respective libraries in maintaining themselves as individual units, decided to combine the two institutions. After many negotiations with their respective boards a successful outcome was realized. Mr. John Stewart Kennedy, president of the Lenox library, was then consulted and taken into the new plan, which resulted in the three institutions giving up their separate existence and the New York Public Library was formed on May 23, 1895.

Two major problems confronted the new institution: what was to be its policy, and, second, who was to be its executive officer to adequately carry through the great object in view? The latter problem was solved when the Executive Committee submitted the name of Dr. Billings to the trustees, who was at once approved by the board.

Dr. Billings came to this work at the age of fifty-eight, when most men begin to think of resting from their labors, but, possessing the sterling qualities of the capacity for work and for organization with an eagerness always to contribute to the public good, he undertook this great task, which resulted in the erection of the magnificent library building on Fifth Avenue, New York, and the remarkable removal to it of the million volumes now housed here, with a working staff of nearly a thousand people. However, the road to this end was a difficult one. To obtain the site for the library a special legislative act had to be passed, and the consent of the mayor, aldermen, and commonalty of the city obtained. It was also necessary to seek the aid of the city for the construction of the library, as sufficient funds were not at hand for this undertaking. To accomplish this another act of the legislature was necessary, and by the spring of 1897, two years after the original consolidation, preparations for the architectural competi-

tion were made. Dr. Billings, in company, with Mr. John L. Cadwalader, made careful examinations of many of the leading libraries of the United States during the first half of this year, Dr. Billings adding to this his European experiences gained in the preceding summer. On April 5, in Atlantic City, Billings outlined in pencil, as the basic idea for the architectural competition, the original sketch plan, from which Professor William Ware, of the Department of Architecture, Columbia University, developed the further plans.

A contract between the City of New York and the New York Public Library was signed and sealed on December 8, whereby the city agreed to construct and equip the building, while the library corporation undertook, on its part, to place and arrange its entire book collections in the building after its completion.

Meanwhile, Billings began the gigantic labors of supervising the reclassification and recataloguing of the books and pamphlets and their arrangement on the shelves. He recatalogued the entire collection on a uniform plan, making an author catalogue for official use; and, for public use, making, as he had done for the Surgeon-General's collection, an Index Catalogue of authors and subjects arranged in one alphabet.

The next year, 1900, was devoted to the question of the consolidation of the numerous free circulating libraries of the City with the New York Library. In due course consolidation was effected and, with a very generous donation of five million two hundred thousand dollars by Andrew Carnegie and the furnishing of sites by the City of New York, the erection of sixty-five branch libraries was made possible, in the various boroughs of New York City.

On May 23, 1911, the new building was formally opened to the public, the ceremonies being held in the rotunda in the presence of an audience of about six hundred persons. The procession, headed by Dr. Billings and Mr. Edwin H. Anderson, the Director, included Mr. Carnegie, Mr. Cadwalader, Mr. Rives and the other trustees, the Mayor of the City, the Governor of the State of New York and the President of the United States, Mr. Taft. Thus the last crowning achievement of this great man was completed.

The work upon which Billings' name and fame most securely rests is the Index

Catalogue of the Library of the Surgeon-General's Office, but in his long and fruitful career there were many other chosen fields of activity—medical bibliography, hospital construction, hygiene and sanitary engineering, vital and medical statistics, and the advancement of medical education and medical literature, upon which only a brief comment can be made here.

In the field of construction Dr. Billings supervised the planning and administration of at least seven important structures—the Barnes Hospital in Washington; the Army Medical Museum; the Johns Hopkins Hospital; the Laboratory of Hygiene and the William Pepper Laboratory of Clinical Medicine in Philadelphia; the New York Public Library, and the Peter Bent Brigham Hospital in Boston. Of these, the Hospital in Baltimore, acknowledged after its opening to be the best of its kind in the world, established his reputation as a hospital constructor.

For a period of about twenty years, Billings was regarded as the authority on public hygiene in the United States; beginning with his report on the hygiene of the United States Army, and culminating in his appointment to the professorship of hygiene in the University of Pennsylvania. His addresses on state medicine before the American Public Health Association and other societies had great weight in their day. He reorganized the Marine Hospital Service, played an important part in handling the yellow-fever epidemic at Memphis in 1879, was the author of important bibliographies on cholera and alcoholism, many special reports on public hygiene and military medicine, a treatise on ventilation and heating, and three separate treatises on hygiene. During his whole official career, he was in constant demand as an expert advisor in the sanitation of cities and buildings and as a sanitary and ventilating engineer.

Billings was also an accomplished statistician. From 1878 until 1912 he had taken an active interest in the national census. His extensive and accurate reports on the vital and medical statistics of the United States in connection with the Census taking of 1880, 1890, and 1910 are monumental achievements.

In the development of American Medicine towards a more dignified status, exemplified in the Index Catalogue and the Johns Hopkins Hospital, he did as much as any man of

his time. His critical surveys of the status of American medicine in 1876 and 1886 displaced the old provincial standards and his "History of Surgery," published in 1895, is acknowledged as the best work on this subject in English.

In acknowledgment of the value of his work in science, Dr. Billings received many honorary degrees, being singularly honored by the Universities of Edinburgh LL.D., 1884; Harvard LL.D., 1886; Oxford LL.D., 1889; Munich M.D., 1889; Dublin M.D., 1892; Budapest M.D., 1896; Yale LL.D., 1901; and Johns Hopkins LL.D., 1902; and was made an active or honorary member in many medical and scientific societies. On April 17, 1883, he was elected to membership in the National Academy of Sciences, serving as its treasurer from 1887 to 1898 and on many of its committees. In 1902 the Carnegie Institution of Washington was incorporated, which by 1911 had acquired a total fund of twenty-two million dollars through the generosity of Mr. Carnegie. From 1903 until the time of his death, Dr. Billings was continuously Chairman of the Board of Trustees and served as a member of the Executive Committee from the date of its organization in 1902 to 1913.

Here has been sketched but briefly the history of the life of one who will ever be remembered for his valuable services to the country. Few who came in contact with him were aware that this strong, forceful, individual had to cope with more than his share of the ills of man. During the last two decades of his life, he suffered from both the cancerous and the calculous diatheses, and was eight times on the operating table, four of these being major operations. Between 1890 and 1892, he suffered from cancer of the lip, undergoing five operations for its removal, of which the last, performed by Dr. Halsted at Baltimore, was extensive and radical, involving removal of glands of the neck. In the last four years of his life, he had two patches of cutaneous epithelioma which were successfully treated with radium. In 1900 he was operated on

for removal of a biliary calculus and in 1906 a cholecystectomy was done. He bore all these sufferings with fortitude and stoicism and never referred to any of them.

In 1913 he again went up for operation, the removal of another calculus, on March 4. For the first few days he rallied in a very encouraging manner. Pneumonia set in, however, and he grew weaker and died on the evening of the eleventh.

It is not easy to give an adequate idea of the man. Dr. Garrison has paid a beautiful tribute to his character and personality in his Memoir of John Shaw Billings:

"In the prime of his life Billings was a figure of powerful build and commanding appearance, with a handsome head, a straight, refined nose of the Napoleonic type, and clear open blue eyes. The whole man was in the strong, earnest look of those remarkable eyes, which, however dim they may have become in old age from long vigils of close night work, always retained something of the direct military glance. Even as a child he seems to have had the tendencies of the student and philosopher. Yet he was a man of affairs almost from boyhood up, spending his honorable youth as a soldier in the field, and more than half his life as a civil administrator of multifarious duties. Everything to be done, every public duty or private obligation was duly pigeon-holed in his mind, and all promises were faithfully kept and promptly performed. He was always sincere and whole hearted, and marvellous was the ease with which he disposed of the complex affairs with which he had to deal. His opinions were delivered with a remarkable, bold surety, downright and forthright, which sometimes produced the impression of 'snap judgments,' but he seldom went wrong. Few sentences went from his lips which did not wing the center of the target or near it, and he never wasted words in business. Thus he came to be looked up to and sought after everywhere as that rare thing in modern life, an absolutely reliable man. In his official life, he bound his co-workers and employees to himself, and set them an example, by this single trait of reliability, with all that it implies of honor and honesty and fair dealing.

"He was sometimes rugged and downright in his handling of affairs, a Viking, no doubt, but it is through the friends he attracted to himself that we must see his whole personality. There was absolutely nothing small or mean about him, and, in all his private relations, there was a vast amount of gentle sympathy, which was usually implied rather than expressed. No one could look into the eyes of this remarkable man for long together without realizing that he was in the presence of a personality of the first order, 'honest as the tides,' strong and tireless and reliable as nature, clean and pure as the great forces in nature."

MICHIGAN'S DEPARTMENT OF HEALTH

C. C. SLEMONS, Dr.P.H., M.D.,
Health Commissioner
LANSING, MICHIGAN

TYPHOID OUTBREAK IN BAY CITY

From an epidemiological viewpoint, the outbreak of typhoid fever that occurred during December, among guests at a Polish wedding in Bay City, proved to be a most interesting one. The Michigan Department of Health assisted the local health officer, Doctor G. W. Moore, in investigating the epidemic, the source of which was found to be a carrier.

Eighty persons attended the wedding dinner, and it is believed that at least ten cases of typhoid resulted, although only nine were positively diagnosed as such. One death occurred among these nine, and the tenth case, which also proved fatal, while not definitely diagnosed as typhoid, was considered, from circumstantial evidence, as probably typhoid.

Investigation of those who had any part in the preparation of the food served at the dinner exonerated the cook, a Polish cateress. She had no history of typhoid, and there was no evidence or history of typhoid having occurred among those attending the dinners for which she had previously cooked. Stool specimens from her were negative for typhoid bacilli. The carrier was finally discovered to be one of those who had helped prepare the dinner. This individual had had typhoid some years before, and three different stool specimens showed typhoid bacilli to be present.

MEASLES PREVENTION AND MODIFICATION

The possibilities of prevention or modification of measles after exposure is the subject of a letter sent by the Department to all practicing physicians in Michigan. More than the usual prevalence of measles is expected during the next three or four months in at least some parts of the state. The letter emphasizes the fact already announced in this section that the Michigan Department of Health now offers to physicians, without cost, ampules of sodium citrate solution to be used in the administration of whole adult blood to children who have been exposed to measles. This procedure is believed to be of very definite value and to give promise

of saving a good many lives of children under the age of five.

BIOLOGIC PRODUCTS

Constant inquiries are received from physicians as to the biologic products furnished by the Bureau of Laboratories of the Michigan Department of Health. The complete list follows:

MANUFACTURED PRODUCTS:

(distributed free)

- Diphtheria antitoxin and toxoid.
- Schick test material.
- Dick test material.
- Scarlet fever strep. toxin, active immun.
- Scarlet fever streptococcus antitoxin.
- Smallpox vaccine.
- Typhoid vaccine.
- Tuberculin.
- Tetanus antitoxin (distrib. to State Inst.).
- Sodium citrate outfit for measles.
- Poliomyelitis convalescent serum.
- Silver nitrate ampules.
- Diagnostic sera.
- Bacterial antigens.
- Media (distributed at cost).
- Kahn antigen (distrib. free in Michigan).

AUTOGENOUS VACCINES:

Preparation of streptococci and in exceptional cases for a few other organisms (fee is charged for preparation).

BACTERIOPHAGE:

Prepared and distributed free in Michigan for staphylococcus, colon bacillus, B. typhosus, hemolytic streptococcus. Cultures are requested when etiology is in doubt.

RABIES VACCINE:

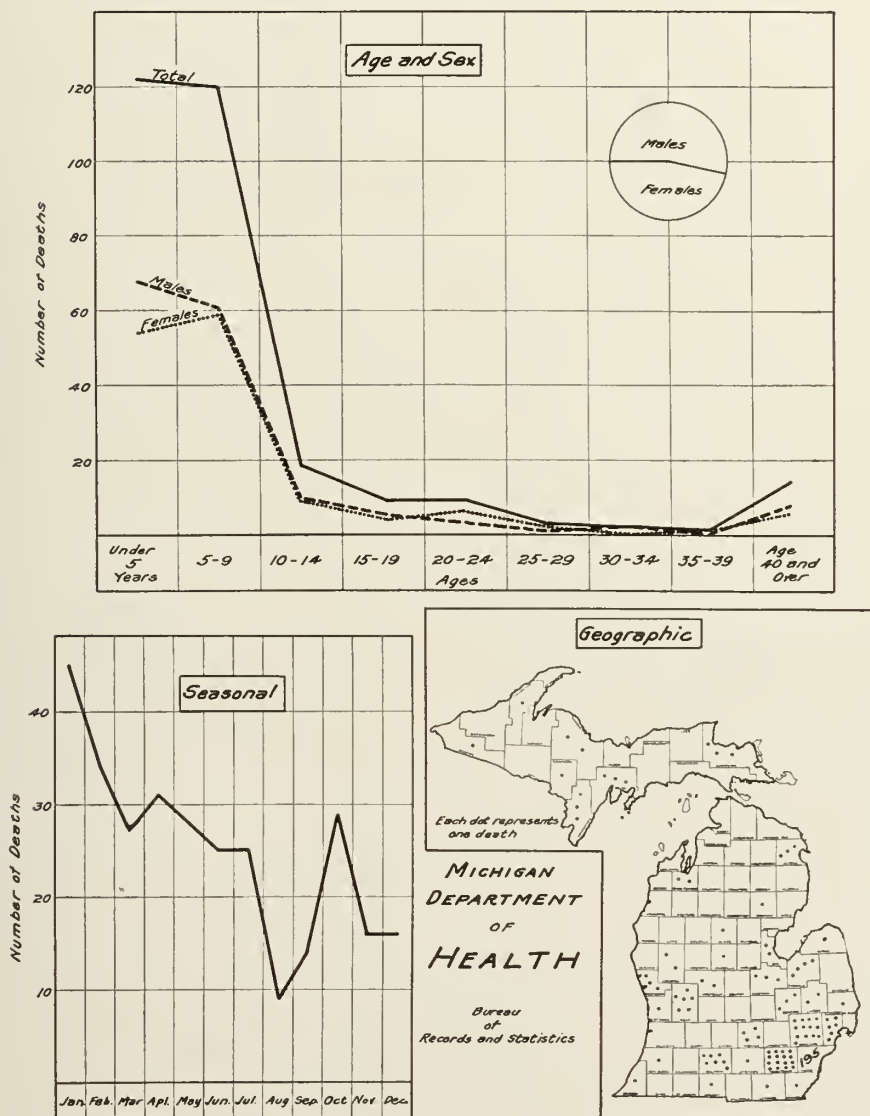
Ready by April 1.

CHILD HYGIENE ACTIVITIES

Outstanding among the activities of the Bureau of Child Hygiene and Public Health Nursing for the month of December, was the completion of diphtheria immunization in Delta and Gratiot Counties. In Delta County, Miss Annette Fox, Nursing Director for the Upper Peninsula, was instrumental in securing a complete series of treatments for over 4,100 children. In some

DIPHTHERIA

The age, sex, seasonal and geographic distribution of 299 Deaths in Michigan in 1930



communities Miss Fox assisted the local doctors in giving the treatments and in others she aided local nurses in organizing for clinics.

In Gratiot County practically every doctor in the county gave generously of his services at the diphtheria prevention clinics organized by Miss Nell Lemmer. The doctors were paid out of an appropriation of \$800 made by the supervisors last October. With a school population of 9,300 for the county, it was gratifying to note that ap-

proximately 7,100 children were given complete treatments.

Women's Classes in Bay County, conducted by Dr. Ida Alexander with an attendance of approximately 1,800 women, have been completed. Dr. Alexander was assisted in these classes by Helen Linn, who gave special talks on nutrition.

Dr. Muriel Case began her work with Women's Classes in Huron County during the week between Christmas and New Year's. In the little town of Ruth, in the

two hours' class held Monday afternoon, December 28, there was an attendance of 93.

Child Care Classes were completed by Miss Ferriby in Sanilac County in December and begun in Osceola County. Miss Bertha Cooper completed classes in Allegan County and started a new series in Van Buren County.

Miss Julia Clock spent approximately three weeks with Miss Martha Giltner, doing prenatal work in Berrien County. Miss Giltner had a total of 55 new prenatal patients for the month of December. Doctors and patients are availing themselves freely of Miss Giltner's services, with the result that a very constructive program is being made possible.

L.R.S.

SIGNIFICANT PROBLEMS IN ACUTE ANTERIOR POLIOMYELITIS

George Draper, New York, calls attention to the fact that although the researches of the past twenty years have exposed many of the complicated secrets of acute anterior poliomyelitis, there are still certain key points which remain unsolved. Of these the most pressing are, first, the exact way or ways of transmission; second, the sure diagnosis of the disease before the movement of invasion of the central nervous system; and, third, a satisfactory method of protective immunization. An answer to the first of these problems would quickly set at rest the present justifiable anxiety of parents, because a real step toward epidemic control would follow. The suspected healthy carrier and the unrecognized mild case not showing paralysis together form a combination which utterly defeats the ends of any but absolute quarantine of entire families. If, in addition to the now firmly established fact of direct transmission from person to person, there be added the possibility of raw food and milk borne infections, successful epidemic control is well nigh out of the question. Consequently, it is quite impossible to answer authoritatively the frequent parental query: "Shall I take the children away?" As matters stand it is doubtless best to advise that flight from a known focus usually is futile. There are too many instances in which, at the new location of hopes for safety, the fleeing family finds itself settled next door to a case which developed on the day of their arrival. Ordinarily it is better to remain in the infected area and rely on the skill of the aroused and alert physicians to make an early diagnosis and administer immune human serum. The second master key, which indeed is almost fashioned, is that which opens the diagnostic lock in the paralytic stage. So far as the individual stricken child is concerned, the solution of this point may be the means of saving life or preventing paralysis. The scope and purpose of the author's paper, however, do not permit a discussion of the clinical picture of the systemic phase of the disease. There is a stage in the disease which precedes that of beginning muscle weakness in which there is clear clinical evidence that the anterior horn cells are already intoxicated though not yet seriously injured. This is the stage of ataxic tremor and muscle twitching.

It seems to be analogous to the excitement stage of the experimental disease in monkeys. When this ataxic tremor sets in it is fair to assume that the virus has already entered into conjunction with the anterior horn cells. The physiologic effect of this first entry is one of stimulation. But since this union has been formed the moment may be too late to expect successful neutralizing effects from the serum. Consequently, these cases, should they go on to paralysis, will fail to support the therapeutic value of the serum. Clearly, then, the brief interval of time between the moment of choroid plexus penetration and the moment of virus-cell union "passage period" is the precious period during which the serum can be expected to neutralize the invading virus and so prevent paralysis. Not only is this period of short duration, but it is extremely difficult to place accurately in the course of the malady. The time relationships between the systemic phase, the "passage period" and the ataxic tremor phase are fairly well indicated by the correlation of clinical signs and spinal fluid observations. Furthermore, it has been definitely shown that immune human serum can block paralysis in monkeys infected with poliomyelitis virus. Having these facts at one's disposal, one should be able to prevent paralysis except in those comparatively few cases which display so slight and transient a systemic phase that the second or central nervous system phase arrives apparently as the first sign of illness.—*Journal A. M. A.*

MECHANICAL COMPRESSION OF SPINAL CORD BY TUMOROUS LEUKEMIC INFILTRATION

Hans H. Reese and William S. Middleton, Madison, Wis., report two cases of mechanical compression of the spinal cord by tumorous leukemic infiltration and one case of a localized leukemic infiltration of a peripheral nerve in the lower extremities. They state that children and young adults presenting a symptom-complex of paraplegic pseudoparalysis or complaining of painful conditions of the vertebral column should be examined for leukemia, the possibility of an aleukemic state being kept in mind. The paraplegias resulting from infiltrating masses of the peridural tissues do not differ from the known syndrome of spinal paraplegia. The first symptoms are persistent pain in the back, usually of sudden onset, radiating intermittently into the legs or girdlelike as in gastric crises. The lower extremities become heavy and stiff because of hypertonicity, and a spastic paretic gait is seen. The paravertebral muscles and the vertebrae are hypersensitive to pressure and percussion. This period of posterior root irritation ushers in the phase of progressive cord compression with paraparesis, segmental sensory disturbance, bladder retention and rectal incontinence, until a complete compression syndrome associated with trophic disturbances results. Rapid loss of weight, rise in temperature and severe prostration are important factors in differentiating clinically paraplegias of leukemic character from cases of cord compression due to other tumors. The initial blood pictures are not always indicative of the true illness, but soon the typical alteration and increase of blood cells makes the diagnosis certain. Spinal fluid examination with manometric studies is imperative in order to demonstrate the serologic changes and the compression syndrome. The cells of the spinal fluid should be examined in stained smears because pathologic cell forms may suggest the nature of the compressing agent.—*Journal A. M. A.*

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MARCH, 1932

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon

EDITORIAL

COURTS AND DOCTORS*

This subject is one that of recent years has become of increasing interest to members of the medical profession. The enactment of Workingmen's Compensation Laws has resulted in bringing doctors into court as witnesses more frequently than in former years. In every state also there has been experienced an increase in the number of malpractice suits or charges of malpractice so that it behooves the practising physician to so conduct himself that his defenses shall

always be in the highest degree complete if required. There is an old adage to the effect that ignorance of the law excuses no one. This little book is by an attorney of long years of experience in the conduct of cases on behalf of the medical profession of the State of New York. While it does not pretend to give an exhaustive treatment of the subject of medical jurisprudence, it contains much valuable and practical information on the subject, and we wish it might be read and assimilated by every physician.

The principles of medical ethics and professional conduct as enunciated by the American Medical Association emphasize the fact that medicine is not a business but a profession with its prime object the service it can render humanity with financial reward as a secondary consideration. The amount of gratuitous service rendered by the profession of Michigan is evidence that the medical men are fully cognizant of the high ideals set by them. The wise physician is a tactful person. He is slow or loath to criticize adversely, realizing that the impossibility of knowing all the facts in a given case demands that his attitude towards a brother practitioner should be characterized by generosity.

The impossible is not asked of any general physician. He is expected, however, to "keep abreast of the times" so far as the growing knowledge of his profession is concerned. He should exercise reasonable care and diligence in the pursuit of his professional work. His implied contract with his patient does not guarantee a good result, but he should use his best judgment in an effort to secure a good result. More, however, is required of him who holds himself out as a specialist. The specialist is defined as one "who applied himself to the study and practice of some particular branch of his profession." The physician who holds himself out as being particularly versed in some particular branch of medicine is expected to possess such knowledge and skill as that of the average specialist. In either case he must use his best judgment, which is defined as the faculty of "deciding wisely."

Whatever shortcomings may befall us are more often the result of insufficient care than lack of knowledge. Each contact with the patient should be occasion for further study whereby he should be considered not only as a case but a *personality* as well.

*Courts and Doctors, by Lloyd Paul Stryker. The Macmillan Company Publishers, New York. Pages, 236. Price, \$2.00.

One should keep himself abreast of the times by diligent reading of medical books and journals, by constant or at least frequent attendance on his county and state medical society meetings and by post-graduate courses in which he should be an active as well as passive factor.

The patient has also his duty towards his physician. The relation not by any means one-sided. Without the coöperation of the patient no satisfactory result can be expected. The non-coöperating patient is guilty of contributory negligence in the event of an unsatisfactory result. Mr. Stryker in his well documented book cites judicial opinions which emphasize the importance of co-operation on the part of the patient. Among the duties of the patient mentioned is that of returning from time to time for treatment as directed by the physician. If after several visits to the physician the patient stops coming though instructed to return, his act is construed as contributory negligence.

The chapter on privileged communications should be thoroughly studied. Almost daily many physicians are approached by insurance companies for information obtained by them in their professional relations with patients. It is of paramount importance for physicians to know their rights in such matters under the law.

Chapter III of the book discusses the subject of Action for Malpractice in which we have analyzed the elements of the action, expert testimony, the physician's responsibility for the acts of nurses, internes and other doctors, operations without consent, abandonment, statutes of limitation, the work of testifying. All of these subjects are of paramount interest.

This somewhat lengthy editorial review is made because we believe the physician should know where he stands with his practice in the eyes of the law. In his preface the author says that in the State of New York there were in 1930 an increase in malpractice suits of 256 more than in 1929, making one malpractice suit for every twenty-two members of the Society. There has been reported in Michigan also a marked increase in 1930 over any previous year. The number may be diminished in the future if physicians will become better informed on the legal side of medicine and surgery and conduct their practice according to their best knowledge.

ROENTGENOLOGY AS A SPECIALTY*

An important institution in connection with the American Roentgen Ray Society is the Annual Caldwell lecture which is delivered each year by some outstanding member of the medical profession. The 1931 lecture bears the title of Roentgenology as a Specialty, by Prof. Dr. George Fedor Haenisch of the University of Hamburg, Germany. Roentgenology is defined as a medical specialty comprising diagnosis and X-ray therapy. During the early years following the discovery in 1895, the technical side predominated in which emphasis was placed upon the work of the physicist and the photographer. Physicians began to see possibilities in the development of the new discovery with the result that it became a medical specialty. Even today the speaker maintains that technic is over-estimated while the really more important medical aspect is viewed as unimportant. (Parenthetically, however, the late Dr. P. M. Hickey was accustomed to stress the importance of the finest quality in the production of radiographs.) A correct diagnosis is possible in many cases only when radiographs are made so as to show the pathology in the greatest detail and with the minimum of distortion. Dr. Haenisch, however, stresses the fact that a radiograph is not a picture or photograph to be interpreted as such. Roentgenography has, he maintains, nothing in common with photography except the employment of a sensitive emulsion.

Physicians eventually learned that a knowledge of osteology was not sufficient and that, "Roentgenographical osteology" demands an altogether different knowledge of normal variation, anomalies, age differences than was till then required for the practice of the physician and surgeon. They were not only required to familiarize themselves with geometric and physical laws and the mechanical problems of apparatus but to attempt the most difficult task, which was that of interpretation with the analysis of differences in densities as projected upon a plane surface by the X-rays passing through the body. Such was the beginning of the specialty which at first confined itself to the

*This lecture appeared in the December, 1931, number of the American Journal of Roentgenology, edited by Dr. Lawrence Reynolds of Detroit.

apprehension of foreign bodies and the diagnosis of bone injuries.

Dr. Haenisch mentions a number of obstacles encountered in the evolution of roentgenology as a specialty—among them the improvement of apparatus which took the technic of making the radiograph out of the field of art and made it mechanical, so that it was no longer the possession of the few. This led to a wider use of X-ray apparatus with diminished emphasis on the diagnostic feature. Anyone in possession of an X-ray equipment could make "pictures" which anyone was presumed to be able to interpret. He deplores the tendency of certain manufacturers of apparatus to place as many machines as possible. "When roentgenology will have become universal among general practitioners the consequent lowering of demands made upon apparatus and upon the operator's skill and knowledge will result in a deterioration of the quality and in an arrest of the progress and the development of the art." And again, many hospitals placed the X-ray department in the hands of technicians who made so-called "X-ray photographs" for the staff to interpret. "Even the most efficient roentgen technician can as little take the place of the well trained medical roentgenologist as a good operating room nurse or orderly can supplant the surgeon." Interpretation of radiographs is by no means easy or obvious; it must be learned laboriously, the greatest difficulty being to gauge the limits of one's own knowledge and skill.

The essayist goes on to deprecate the roentgenologist-clinician or the clinician-roentgenologist. "There is no place," he says, "where the union of eminent clinician and eminent roentgenologist in one person has existed for a long period. One of the two subjects must suffer because each requires the full-time and energy of an individual. The rapid development and extensive domain of roentgenology require the complete absorption of a person in it, especially if he is anxious to have a part in research and in its further development."

The professor emphasizes the fact that the roentgenologist is a consulting physician and should be treated as such. His professional relations are wholly with the referring physician, never with the patient.

This presentation of Dr. Haenisch's views on roentgenology as a specialty has empha-

sized the diagnostic phase of the subject. He is equally outspoken in the opinion that radiotherapy should be undertaken only by those who are especially trained for such work.

THE VALUE OF EDUCATION

Germany of the past has been voted by universal consent the best educated country in the world. According to recent press dispatches, German students have been warned that there is little or no prospect of gainful employment on graduating from the universities. Again, it has been rumored that a goodly number of the Berlin police are university graduates. Higher education has become very popular in both the United States and Canada, especially during the past three decades. There are large numbers of young men and women with University degrees who are seeking employment. Many are led to question whether higher education is really worth while. The answer depends upon what one considers the criterion of a good education. Are there not other rewards of education than dollars? President Fyfe of Queen's University, Kingston, Canada, thinks one of the best criteria of a good education is appreciation. The uneducated man is undeveloped, he says, and, therefore, largely insensate. He is blind to many forms of beauty and deaf to many kinds of truth. The object of education is to widen the scope and variety of appreciation and thereby to add to the human store of pleasure and of interest. Speaking of "useful knowledge," Dr. Fyfe says that no knowledge is useful unless it retains its use in any sphere of life. Therefore, it matters not what one's trade, profession or occupation, the function of the college is to produce men who will carry into any calling the appreciation of various forms of truth, beauty and of human character.

True there are:

Some dull conceited hashers
Who confuse their brains in college classes,
They gang in stirks and come out asses,
Plain truth to speak,
And sine they think to climb Parnassus,
By dint of Greek.

But if we accept the criterion of higher education as held by Dr. Fyfe it is worth while under any circumstances for those who are able to profit by it.

MOIST NOT WET

The use of wine is as old as civilization and the persiflage regarding the effects and the "morning after" are apparently as old as the beverage itself. Oliver Wendell Holmes wrote of the "soft convivial glow unaided o'er me stealing." One writer gave four reasons why men drink, namely,

"Good wine, Friends,
Because I'm dry
And any other reason why."

Plato, in the fourth century B. C., writes on the subject of wine and its social effects in his dialogue the Symposium as follows:

After Socrates and the rest had finished supper, and had reclined back on their couches, and the libations had been poured forth, and they had sung hymns to the god, and all other rites which are customary had been performed, they turned to drinking. Then Pausanias made this kind of proposal.

"Come, my friends," said he, "in what manner will it be pleasantest for us to drink? I must confess to you that, in reality, I am not very well from the wine we drank last night, and I have need of some intermission. I suspect that most of you are in the same condition, for you were here yesterday. Now, consider how we shall drink most easily and comfortably."

"Tis a good proposal, Pausanias," said Aristophanes, "to contrive, in some way or other, to place moderation in our cups. I was one of those who were drenched last night."

Eryximachus, the son of Acumenius, hearing this, said: "I am of your opinion; I only wish to know one thing—whether Agathon is in the humour for hard drinking?"

"Not at all," replied Agathon, "I confess that I am not able to drink much this evening."

"It is an excellent thing for us," replied Eryximachus, "I mean myself, Aristodemus, Phaedrus, and these others, if you who are such invincible drinkers, now refuse to drink. I ought to except Socrates, for he is capable of drinking everything, or nothing; and whatever we shall determine will equally suit him. Since, then, no one present has any desire to drink much wine, I shall perhaps give less offense if I declare the nature of drunkenness. The science of medicine teaches us that drunkenness is very pernicious; nor would I choose to drink immoderately myself, or counsel another to do so, especially if he had been drunk the night before."

"Yes," said Phaedrus, the Myrinusian, interrupting him, "I have been accustomed to confide in you, especially in your directions concerning medicine; and I would now willingly do so, if the rest will do the same."

All then agreed that they would drink at this present banquet not for drunkenness, but for pleasure.

BIRTH CONTROL

Among the papers read at the one hundred and eleventh annual meeting of the Michigan State Medical Society at Pontiac, is one by Dr. H. S. Collisi of Grand Rapids, entitled "Sociological Aspects of Contraception," in which the writer discusses a subject that has hitherto received more publicity in the lay than in the medical press. While

technically it may be a medical subject, it is mainly in the domain of sociology. Much that has been presented on the subject has been by the Church, and, until very recently, mainly in opposition to the artificial control of population.

Dr. Collisi notes first the emancipation of woman as seen in her equal right with man to the franchise and her competition with him in many departments of business and professional activity. He discusses what he calls her right to determine her own sex life. Time was, and not so very long ago, when woman lived a protected life; her sphere was confined to the home. Business and professional positions were virtually closed to her. Now all is different; she has entered fields of occupation in which she is compelled to support herself. The essayist thinks it is "an evolutionary movement for race betterment," which "ultimately means race control." He refers to the fact that legislation and religious progress have not kept pace with the evolutionary advance. Perhaps. Some nations, however, have revised their laws to conform to the trend of the times and he sees evidence of this tendency in others.

According to Dr. Collisi, in 1929 there were twenty-nine birth control clinics in the United States "proclaiming the rights of women in the 'prevention of conception for social reasons.'" In 1931, the number has increased to eighty-one, located in seventeen different states. The argument that birth control will seriously diminish the birth rate is answered by the situation in Holland, Switzerland and Soviet Russia, where it prevails with no apparent detrimental decrease in population.

The value of permanent sterilization in the case of mental defectives and confirmed criminals would seem beyond question. It would be not only a measure of safety to the normal population but it would be a great economic movement. Dr. Collisi cites one family studied by a Swiss physician in which, in five generations, eight hundred and thirty-four persons descended from one mentally defective female. The descendants included seven murderers and sixty-four others who were imprisoned for various offenses totalling one-hundred and sixteen years imprisonment. The total cost to the state was estimated as approximating \$1,-200,000. The notorious Jukes family is a

classical example of a similar result in this country. Heredity is a powerful factor in racial evolution. One cannot gather figs of thistles.

The medical profession have a duty to perform in pointing out the harmful as well as the beneficial effects of birth control upon the health of the prospective mother as well as its ultimate effect upon society. "The medical profession and the state should work in harmony in determining the best scientific and legal procedures," writes Dr. Collisi. In this we heartily concur. While it is a subject on which medical opinion should be sought, birth control is, as we have said, largely a social or sociological matter. It is one in which, like prohibition, not much will be accomplished in moving too far in advance of public opinion.

Dr. Collisi's paper has presented a subject about which, editorially, we prefer to preserve an open mind. We have no editorial policy to announce regarding it. Birth control has probably always been practiced by those who, owing to their favorable economic circumstances, might not have limited their families and it has been wholly disregarded by those who, for the sake of the family and the nation, might better have exercised restraint.

A BIT OF MEDICAL HISTORY

(HIPPOCRATES AND CONTEMPORARY
PHILOSOPHERS)

Hippocrates, according to Celsus, separated medicine from philosophy, just as Socrates was accredited with bringing philosophy down from heaven to serve mankind. In other words he turned the minds of men from vague speculations on the heavenly bodies to study for the purpose of clarifying their own ideas. To know oneself was the object of the thinker of the golden age. So Hippocrates turned men's minds from speculation about disease to careful observation of the phenomena of disease. He initiated the inductive method—the enunciation of a general rule from the observation of particulars. Galen gave us the deductive method, the method of trial by experiment. One deals with facts already in existence; the other creates facts as needed. The induction method of Hippocrates—observation and inference—must be the starting point of medical research. This,

of course, must be supplemented many times by the deductive or experimental method of Galen. The latter method is one by which the conclusions of the former may be tested. The inductive method is commonly associated with the name of Francis Bacon, who emphasized the idea of generalization. "The mind," he said, "had a yearning which makes it dart forth to generalities, that it may have something to rest in; and after a little dalliance with experience becomes weary of it." Hippocrates, however, was not trying to work out a logical instrument of scientific investigation. He hit upon it by fortuitous circumstance. He was a practising physician with little interest other than to restore sick people to health. Bacon's interest was in the method rather than in any practical application that might be made of it. His was the reflecting mind; that of Hippocrates was the observing mind.

The Greeks held to the belief that extremes were always to be avoided. "Nothing in excess" was their motto. Imbued with this philosophy Hippocrates considered that excess of health was akin to disease. He maintained that medical aid should be withheld from those who are incurably ill, reserving it for those who could be cured or in whom the severe attacks of disease might be mitigated. Medicine like every other art had its limits.

* * *

Hippocrates refused to believe, according to the custom of the time, that any disease was sacred or divine. Epilepsy was considered the "Sacred Disease" according to popular superstition, which held it to be of divine origin. Everything according to Hippocrates was divine, and everything human. It was unreasonable to call one disease more divine than another.

The Four Humors, he maintained, were intimately associated with seasonal and climatic variations. The phlegm, a cold and moist humor originating in the brain, is associated with winter; yellow bile is associated with summer; it was a warm and dry humor derived from the liver. In the spring the blood gave rise to inflammatory diseases. It was the warm and moist humor originating in the heart. Black bile was presumed to arise from the spleen; it was a cold and dry humor connected with the ailments of that organ.

Greek writers as a rule were reticent about their contemporaries so in the writings of Hippocrates only two are mentioned by name, namely, Mellissus, the admiral of Samos, who defeated the Athenian fleet in 441 B. C., and Empedocles. On the other hand, we are surprised at the scant reference to Hippocrates in classic Greek literature, mention being made of him only once or twice by Plato and Aristotle. The *Zeitgeist*, however, has its innings whether definite mention or not be made of contemporary philosophers. The influence of such men as Pythagoras, Heraclitus, Anaxagoras and Democritus are to be traced in the writings of Hippocrates. Pythagoras laid great stress on the number 7 which possessed almost a mystical sanctity for him. The seven month child was expected to live, but not an eight month child. Hippocrates' reverence for the number 7 amounted almost to an obsession. The great stress placed upon the importance of proper diet is also traceable to Pythagorean influence.

Heraclitus influenced Hippocrates even more than did Pythagoras. He was born at Ephesus in 535 B. C., about seventy years before Hippocrates. Heraclitus was a pronounced aristocrat and lived largely by himself. He was known as "the weeping philosopher." He taught that it was not the knowledge of many things that mattered so much as the accurate knowledge of only one thing. The word (*λογος*) or the ultimate truth was the perception of the unity underlying things apparently opposed to one another. The apparent strife of opposites was due to the tension which held the world together. "All things are in a state of flux." "No one has ever bathed twice in the same stream; for different waters are constantly flowing down; it dissipates its waters and gathers them again—it approaches and recedes; it overflows and falls." "All is motion, there is no rest or quietude." Such is the philosophy of motion.

* * *

The Eleatic school taught the philosophy of rest. We see how, at this early time, Heraclitus anticipated the teachings of modern science. With the views of Heraclitus contrast Hippocrates, "All things are passing, both human and divine, upwards and downwards by exchanges." Human beings are in flux as is everything in the world. We are never the same for two consecutive moments.

The influence of the Eleatic school of philosophy upon Hippocrates was on the whole negative; except that it served to stimulate his opposition. Parmenides, the most outstanding member, taught that the ultimate form of matter was one eternal substance which is neither generated nor destroyed. He opposed the ordinary common sense notion which believed in the world as perceived by the senses, for to him the doctrine of motion was absolutely false. To him, *Being* was unchangeable as well as eternal. Melissus, who was an understudy of Parmenides and the systematizer of the Eleatic school, was strongly opposed by Hippocrates. The Eleatic school excited his opposition in as much as it seemed to him incompatible with his observations of the phenomena of disease.

It was unfavorable to any advance in medicine, for it seemed to render impossible all knowledge of disease.

* * *

Next to Heraclitus is Empedocles, whom Hippocrates mentions by name. He was a statesman, orator, poet, physician and mystic. He was born in Sicily about 500 B. C. Regarding him Matthew Arnold* wrote:

"Thou hast heard all men speaking of Pantheia,
The woman who at Agrigentum lay,
Thirty long days in a cold trance of death,
And whom Empedocles called back to life.

* * *

He could stay swift diseases in old days,
Chain madmen by the music of his lyre,
Cleanse to sweet airs the breath of poisonous
streams."

Empedocles made a number of discoveries in biology. He described the labyrinth of the ear by dissecting the ears of goats. He also observed that in plants there were the two sexes combined. He wrote fairly extensively on medical subjects and anticipated the theory of evolution for he maintained that the more perfect proceeded from the less perfect.

Empedocles taught the doctrines of the four elements, earth, air, fire and water, which he considered ultimate. They were "elements" to the ancient Greek philosophic mind, as the chemical elements are to the modern. It was these elements which Hippocrates identified as hot and cold, moist and dry, from which come the four humors, blood, phlegm, yellow bile and black bile, to which we have already referred. A proper mingling of these according to him deter-

*Empedocles on Etna. Matthew Arnold.

mined health and disease. Empedocles, unlike the Eleatics, believed in change and motion. He regarded the heart as the organ of consciousness. Here he proved inferior to Hippocrates, who attributed all intellectual and moral functions to the brain. Hippocrates and the Coan school regarded the brain the seat of mental disorders whereas the Sicilian school of Empedocles claimed their origin in the heart.

* * *

And lastly, of contemporary philosophers might be mentioned Democritus whose name is associated with the enunciation of the atomic theory. In common with most thinkers of the time, Democritus wrote also on medicine. Some of his bizarre theories were shared by Hippocrates. However, we quote the following letter, reputed to be from Democritus to Hippocrates: "All men ought, O Hippocrates, to know the art of medicine and particularly those who have received some education, for it is at once a fine thing and useful in life. I am of the opinion that the knowledge of philosophy is sister to that of medicine and dwells under the same roof; indeed, philosophy delivers the soul from passions and medicine removes disease from the body. The mind grows as long as health is present, which a wise man should take care of, but when the body suffers the mind no longer troubles about the practice of virtue, for disease darkens the soul terribly by the sympathy it has with the intelligence."

LITTLE BUT GRAVES, WORMS AND EPITAPHS

(Manchester Guardian)

The less said about 1931 the better. It has been full of crises and disorders and bankruptcies; and it is doubtful if European civilization could sustain many more such years. News has been only of disasters; and if there exists in the world any piece of territory whose inhabitants have not been distraught by economic difficulties it must lie in so remote a place as to be unaffected by prevailing tendencies and independent of general price levels. Perhaps, in some oasis in the very heart of the Sahara, dates may still be gathered and eaten and digested by the hungry irrespective of quotations on the stock exchanges; perhaps forgotten in some African jungle, savages may still go about their customary occupations without leaving some of their number to sit in hungry idleness while the others pile up quantities of food and clothing that none may eat or wear. If it is indeed so, then bedouins and savages enjoy privileges denied to the civilized man. That unfortunate, as means of production improve, as the earth is made more fruitful and the machines more competent, finds himself in an ever more miserable plight. Unable to dispose of what he makes, he is left, in increasing numbers, without work and with-

out wages. Such a famine of plenty has prevailed throughout 1931. Is it to go on throughout 1932? The answer rests with those in authority. They alone have the power to order things differently. And it must be admitted that their past performances and their latest statements of policy do not encourage the hope that they will easily solve in 1932 the problems that have so completely baffled them in 1931.

CARRYING ON

Life began on the earth in a pool of rain water beside a volcano, says a Swedish geologist, the chemical action of the water on the volcanic ash making possible the spontaneous appearance of protoplasm.

In a steamy saline pool
When the earth was getting cool,
Years before the time of Noah,
Samson, Solomon and Sheba,
Lived a primitive ameba,
First of all the Protozoa.
Mother, father had he none;
Water, salt and proper heat
Generated him complete.
Thus was early life begun.

Earth was then a dreadful dump,
Nature in a total slump,
Cinders, cinders everywhere,
Everywhere volcanoes blowing
All the world to Tophet going!
Did our little friend despair?
When the country quaked and slid
In the elemental stew,
Did he feel extremely blue?
Very probably he did.

Notwithstanding, all the same,
He was nervy, he was game.
All his courage he recruited,
And he cried, "Am I a lily?
Guess again!" and bravely still he
Carried on and evolved.
Hence we have the hen, the jay,
Lions, butterflies and lambs,
Cows and horses, flounders, clams,
And the human race today.

Now, the moral point of this
Hardly any one can miss.
If that plucky little early
Protozoan in his puddle
Persevered amid the muddle
Of the primal hurly-burly—
If a mere ameba thus
Rose above a world depression
And continued on in session,
Maybe there is hope for us.

—The New York Times.

HELPLESSNESS

A'm no askin' ony questions an' a'm no requiring
ony body tae answer ony ah do ask, bit a'm wonderin'
aw'fu' hard like, if we're nae gatherin' a lot
o' habits wha's a' th' time increasin' oor helplessness.

Mon! bit a'm sometimes thinkin' that we'll soon
no be able tae turn roond in oor ain hame, wi'oot
somebody tellin' us we're nae doin' it in th' technical
way. Aye! an' we're nae able ony mair tae roll oor
ain cigarettes, nor tae light th' matches tae set fire
tae them.

An' we're no able tae entertain oorsels th' noo.
We hae tae tak what comes tae us frae th' cannin'
factories o' music, or pick oot o' th' clouds th'

weepin' an' wailin' o' a lot o' jass whinners, wha is nae sae guid as oor ain croonin' wid be if we anly regained oor auld habits. Of course we can play th' cairds, bit we're nae responsible for th' cairds we hold, whas gi'en tae us by a maun whas nae tryin' tae gi' us guid anes.

When ah wis a wee laddie at hame, ane o' ma jobs on a saturday afternoon was tae gaither a' th' family shoes th'gither an' black an' polish them, heels an' a, for th' sabbath Kirk goin', bit we're sae helpless th' noo that we hae tae gang intil a foreign man's place an' spend monie tae hae him dae it for us.

An' we're haein' a lot o' shemen th' noo, wha sit in a barber chair whiles th' barber shaves his face, an' th' colored maun blacks his shoon, an' th' lady wi' painted hair polishes his nails. Bit th' thing that ma's us mair useless than ony thing else th' noo is th' sliced bread we hae tae tak frae oor grocer. Weel, a'm tellin' ye, a'm nae for it. Th' slices are too thin.

Noo days when a lady is ga'in tae hae a baby, she has tae hae a hospital, a nurse, an operatin' room, an anesthetist, a barber an' ither flunkies besides th' docter. But ah mind th' nicht when a mither gat oop against ma orders an' gi'ed me a haund tae wash an' dress th' bairn, then washed hersel an' gat back intil a clean fresh bed where we snuggled her awa wi' th' bairn at her bosom. Then she patted me on th' airm, an' kin' o' shy like, whispered that th' monie wis hidden awa ahint th' clock. MON! bit there's a lot o' you chaps th' noo, wha wid wash an' dress twa babies tae hae a young mither pat ye on th' airm,—especially if she telt ye where th' mony was.—Ah weel,—Guid Nicht.

WEELUM.

OBITUARY

DR. ROY W. GRISWOLD

Dr. Roy W. Griswold, of Freeport, died December 25 at Pennock Hospital. He was born at Kendall, New York, in 1873. Dr. Griswold graduated from the Detroit College of Medicine in 1898. He spent several years on the staff of Walter Reade Hospital, Washington, D. C., came to Freeport twelve years ago. He is survived by his wife, Clara L. Griswold, one sister, Mrs. Walter Pease of Morton, New York, and two stepdaughters, Mrs. G. W. Kilgus of Manhasset, L. I., and Mrs. W. A. Seifert of Freeport.

DR. EDWIN E. HUBBARD

Dr. Edwin E. Hubbard of Dearborn died at Harper Hospital, Detroit, December 29, 1931, following a long illness, nephritis. Deceased was born at Adrain in 1897. He received his early education in the village of Wayne, the Wayne High School, and later the Michigan State Normal College. He attended and graduated from the Detroit College of Medicine in 1923 and began practice in Dearborn in 1924. He had been active in municipal affairs during the past eight years. Dr. Hubbard also was a member of the Wayne Blue Lodge, F. and A. M.; Olive Branch Masonic Chapter, Detroit Consistory, Dearborn Lodge, Loyal Order of Moose; Fordson Lodge, I. O. O. F.; Dearborn Chapter, Order of Eastern Star; Wayne, Michigan State and American Medical Societies; the Fordson Rotary Club and the Captain Phelps Collins Post, American Legion. Besides his widow, Ruth E., he is survived by a son, Charles Edwin, two years old. His parents, Mr. and Mrs. Freeman Hubbard, were pioneer residents of Wayne. They died two years ago.

GENERAL NEWS AND ANNOUNCEMENTS

Mr. George Doty, father of Dr. C. A. Doty of Detroit, died on February 12 at the advanced age of 82 years, at his home at Lacota, near Kalamazoo.

Dr. Angus McLean of Detroit, addressed the West Side Medical Society on February 18 on the subject of Economic Phases of Medical Practice.

Dr. William Dugan of Battle Creek is pursuing post-graduate work in surgery at the Charity Hospital, New Orleans. He will return to Battle Creek late in the spring.

Wm. J. Burns, Executive Secretary of the Wayne County Medical Society, Detroit, has been invited to speak before the Shawnee County Medical Society of Topeka, Kansas, on Monday, March 7, 1932.

As a movement toward civic economy on the part of both city and county, it has been suggested that the county of Wayne take over the Herman Kiefer Hospital and the Maybury Tuberculosis Sanatorium.

Dr. William Clift, who came to Detroit and established an X-ray practice following the close of the war, has returned to Flint, where he has been appointed roentgenologist to the Hurley Hospital.

Dr. William J. Stapleton, Jr., Chairman of the Committee on Medical Defense, has moved his office from Fort St., Detroit, to 641 David Whitney Bldg., Detroit, adjacent to the office of the editor of this Journal.

The Council of the Wayne County Medical Society has decided that a joint research be established with The Detroit Edison Company on "The effects of radiant energy on matter as pertaining to the practice of medicine."

Dr. Plinn F. Morse, pathologist of Harper Hospital, Detroit, addressed the Calhoun County Medical Society on February 2 on the subject of Parathyroid Dysfunction. Dr. A. H. Kirtchner at the same meeting spoke on the subject of Ovarian Hemorrhage.

"The Diagnosis and Treatment of Tuberculosis in Children," was the subject of an address by Dr. Henry D. Chadwick of the Herman Kiefer Hospital, Detroit, before the Genesee County Medical Society on January 20.

Dr. H. R. Carstens of Detroit addressed the Genesee County Medical Society on the subject of European Hospitals. Dr. Carsten's address was in the form of an illustrated travelogue based upon first hand experience in the countries of western Europe.

Dr. Thomas L. Patterson, professor of physiology of the Detroit College of Medicine and Surgery, at 1512 St. Antoine St., Detroit, has been awarded a prize of \$250 from the New York Academy of Science for a paper on the "comparative physiology of the gastric hunger mechanism." This prize, called the A. A. Cressy Morrison Award, is given for the most acceptable paper on experimental biology embodying original research not previously published.

The Wayne County Medical Society has organized a medical and a surgical group to include all men under forty years of age. These meet at the Society club rooms on Tuesday and Friday noons, dine and indulge in the discussion of professional papers of interest to the study club. Recently has been organized a group of those who have been in practice over a quarter of a century. These "aged" ones display the enthusiasm of youth. We propose the organization of a "nondescript" club so that no one will be left out in the cold.

The Beaumont Foundation under the auspices of the Wayne County Medical Society are making preparations for an observance of the 100th anniversary of the publication of the first edition of Beaumont's epoch-making work on digestion. The 100th anniversary will be in 1933. While this Foundation is named after Beaumont the celebration of the event of the publication of his work might well also engage the attention of the Michigan State Medical Society. The present Beaumont Foundation lectures given by Dr. Lewis of the medical department of the University of Michigan are the 11th in the series. This feature of the Wayne County Medical Society has become popular among the medical profession so that many welcome guests are present each year from the county societies more or less distant from Wayne.

A half century of medical service is completed March 2 by Dr. Hugo Erichsen, of Birmingham. On that date 50 years ago Dr. Erichsen graduated from the Detroit Medical College. At the beginning of his career he was an editor of the Detroit Clinic and associate editor of the Western Medical Reporter. From 1883 to 1885 he was professor of neurology at Chaddock College, Quincy, Ill. Under the title, "Medical Rhymes," he published an anthology of medical verse in 1884, and since has written dissertations on medicine. Following his association with Dr. John Henry Carstens, he entered the Detroit City Physician's office in 1889. For 19 years he was a medical staff member at Parke, Davis & Co., and for two years was director of medical service for the Burroughs Adding Machine Co.

Dr. Erichsen holds degrees from the University of Vermont and the Royal College of Physicians and Surgeons, Queen's University, Kingston, Ont. He is a member of the Oakland County Medical Society. —*Detroit Free Press*.

OAKLAND COUNTY MEDICAL SOCIETY PRESIDENT

The election of Dr. Charles A. Neafie, Director of Public Health, City of Pontiac, President of the Oakland County Medical Society, has brought into the executive chair the member best informed in events of the society. This election so makes the Councillor from this district the county president. In addition, the new incumbent unofficially serves the society as its historian.

After a resident in Oakland County of three years, Dr. Neafie joined the society in the December, 1915, meeting in a class with Drs. Foley, Knapp and Mercer. He was first inducted into office in 1919, when he served one year as secretary-treasurer. At the expiration of his term from his suggestion this position was divided into two offices.

From 1927 continuously until 1930, Dr. Neafie occupied the secretaryship. It was during this period that the society's bulletin, which had appeared in 1912 under Dr. Jos. B. Chapman for a few issues,

was republished as a mimeograph folder. After two years it was brought to its present pamphlet, printed form, self sustaining from advertising. In 1931 he was elected to serve as councillor, 15th District, in the Michigan State Medical Society, for a term of four years.

Besides association in the American Medical affiliates, Dr. Neafie is a member of the several public health societies culminating in the International Association of Medical Health Officers, two of which he has served as president. As a vocation he is gathering from all available records and from interviews with oldest residents historical material by decades of the approximately 1,000 medical men who have practiced in the county since its first settlement in 1817.

One of Dr. Neafie's noteworthy contributions to the society was a series of historical sketches of these pioneer medical men appearing in the local press several months ago.

Most significant to Dr. Neafie of the changes occurring in the society has been in the increase in cordial relations between members. So discordant was the society in the nineties that for a period of ten years no president was elected, neither faction being willing for such honor to be placed elsewhere. In the sixteen years of Dr. Neafie's experiences this feeling gradually has given place to one of harmony and united purpose. Paralleling this has been an increase in scientific interest. Scientific meetings have increased from two to ten yearly, in addition to three or four social seasons. Numerically during this period the society has more than trebled.

The practitioner of the future, Dr. Neafie believes, will find increasing emphasis resting upon preventative medicine in the broadest sense. Before the society's immediate attention is the matter of medical care during the current unfortunate period for the truly indigent, which Dr. Neafie shows the society has never failed fittingly to meet. With interest is awaited by the Council of the State Society the report of the special committee to investigate activities of agencies administering to the public health, inaugurated at the last state meeting.—*Bulletin of the Oakland County Medical Society*.

DR. JOHN E. CLARK HONORED

Dr. John E. Clark of the class of 1877, University of Michigan Medical School, was the honored guest at a testimonial luncheon sponsored by the "Seniors Club" of the Wayne County Medical Society, Detroit, Friday, February 12 (Lincoln's birthday), in the new club rooms of the Society. Dr. Clark is still in active practice and goes to his office daily. He has been County Chemist for thirty-five years. He joined the Wayne County Medical Society in 1878—fifty-four years ago—and is the oldest living member. The "Seniors Club," an organization composed of physicians and surgeons who have been in practice twenty-five years or more, has a membership of two hundred and seventy-five. The Club honored Dr. Clark because of his wonderful contribution to the good health of the community during the past half century, as well as for his untiring efforts to aid organized medicine in Michigan. Dr. H. A. Luce, Secretary of the Seniors, sponsored the idea of giving honor to its distinguished member, Dr. Clark.

Seventy-three physicians were present at the Clark testimonial. Dr. Louis J. Hirschman acted as toastmaster. Brief addresses were made by Dr. H. W. Plaggemeyer, President of the Wayne County Medical Society, who presented a Life Membership to Dr. Clark; Dr. O. S. Armstrong, who was graduated with Dr. Clark in the class of 1877, University of Michigan; Dr. Walter Cree, who is Dr. Clark's oldest living student; Dr. C. G. Jennings, and Dr.

Basil Connelly, representing the Noon-Day Study Club. Dr. Clark answered the eulogies, and in a thirty minute address delighted his many friends with reminiscences of medical practice in the "good old days." Telegrams of congratulation from many distinguished people throughout the country were read at the luncheon.

Among those present and the year they were graduated from medical school were: Drs. John E. Clark, 1877; Louis J. Hirschman, 1879; Walter J. Cree, 1883; Andrew P. Biddle, 1886; Arthur D. Holmes, 1889; David McClurg, 1892; H. B. Garner, 1892; John N. Bell, 1892; Angus McLean, 1886; Edwin D. Merritt, 1899; Oscar S. Armstrong, 1877; Wm. Appelbo, 1901; C. Hollister Judd, 1897; Emil Amberg, 1894; George E. Clark, 1888; E. P. Mills, 1899; R. F. Foster, 1903; Robert Hislop, 1883; Carlos W. Shotwell, 1903; H. W. Yates, 1894; James E. Davis, 1896; Thos. Jefferson Henry, 1899; John Taylor Watkins, 1906; Frank A. Kelly, 1903; E. G. Martin, 1904; Wm. M. Stapleton, Jr., 1900; S. G. Miner, 1882; Wm. Fowler, 1903; C. G. Jennings, 1879; A. W. Blain, 1906; H. A. Luce, 1905; A. B. Wickham, 1904; R. G. James, 1904; Wm. C. Lawrence, 1904; C. D. Brooks, 1905; J. A. McGarvah, 1905; A. A. Cowan, 1891; J. D. Matthews, 1892; Harold E. Clark, son of the honored guest; H. S. Kedney, 1906; W. Hipp, 1906; L. Mae James, 1903; B. Friedlaender, 1898; Bert Estabrook, 1903; Burt R. Shurly, 1895; Irwin H. Neff, 1889; Robert L. Schorr, 1893; H. Peyton Johnson, 1897; Albert H. Johnson, 1893; T. Malcom Hart, 1897; H. W. Green, 1896; Hugh Harrison, 1896; J. W. Scott, 1896; Wm. A. Hackett, 1894; O. Z. Ide, 1900; A. B. Lawton, 1900; L. F. G. Wendt, 1902; H. W. Hewitt, 1903; Allan W. McDonald, 1901; A. G. Doty, 1900; H. G. Bevington, 1898; W. M. Foster, —; G. McAlister, 1897; John L. Chester, 1900; Chas. F. Kuhn, 1901; J. B. Hodge, 1906; S. Kahn, 1898; W. M. Donald, 1887; F. J. McCormick, 1905; H. W. Plagemeyer, President; E. D. Spalding, Secretary; J. M. Robb, President-Elect, Michigan Medical Society; J. D. Bruce, Vice President of the University of Michigan.

MEDICAL ECONOMICS

CAN WE AFFORD STATE MEDICINE?

J. G. R. MANWARING, M.D.
FLINT, MICHIGAN

Part I

CAN THE UNITED STATES SAFELY EXPAND ITS FUNCTIONS FURTHER?

"If ever the people become inattentive to the public affairs, you and I, Congress and Assemblies, Judges and Governors shall all become wolves. It seems to be a law of our general nature, in spite of individual exceptions."—Thos. Jefferson in a letter to Edward Carrington.¹

One of the most dangerous pastimes in the world is letting someone else spend your money! A sound business principle is one that requires those who have money to control its expenditure.

The obnoxious secret rebates of the railroads, secret division of fees by physicians, horse traders and others, secret commissions of purchasing agents and all sorts of graft by all kinds of officials, public and otherwise, all follow the fundamental fact that the benefited recipients have at their disposal the

spending of other people's money. Human nature is too weak to be subjected to the seductive lures resident in spending money not one's own.

In government the squandering of public funds is an immediate outgrowth of the principle that other people's money is recklessly spent.

In a democracy, such as we have largely evolved, we have a system of "rule by organized minorities." There is only one type of influence brought to bear in our legislative bodies and there is only one aim. Organized groups harass and push their representatives constantly for legislation desired by them and with one end only, to do things which cost money. Each group desires something paid for out of funds raised from all of us. They threaten the security of our officials by an organized vote and, as it is other people's money, the officials give in to the pressure with enhanced security to themselves.

Up to this time there has not been a really strong organization formed for the sole purpose of putting the brakes on such expenditures and so having some control of their money which is so spent.

Individuals there are who are protesting, but, alone and unorganized, they are crying in the wilderness.

Under this system there is a constantly increasing stream of money coming from taxpayers flowing through legislative channels, controlled by self-seeking interested parties, both as to the amount of flow and its distribution. There has been no control at the headwaters, no halting of the mounting flood, and, as portions of China with a good rainfall and once green with fertility are now ruined and profitless deserts because of the draw-off of their waters due to the destruction of the headwaters control, so must a system of government like ours eventually be destroyed unless we take heed.

As a matter of history, aside from conquests, governments of the past have fallen most often from oppressive taxation made necessary by the squandering of rulers.

An individual who spends too much and becomes hopelessly involved sloughs off his debts by bankruptcy proceedings. So governments when hopelessly in debt fall, with the same results that debts are cancelled and a new start is made but at a cost of tremendous suffering.

A few figures will show how we are going down the same old trail:

The tax bill of Michigan and all her subdivisions of Government has increased from—
\$40,462,353.56 in 1910 to \$340,384,819.43 in 1930.²

The people of Michigan paid in federal and state taxes of all kinds over \$500,000,000 in 1929.³

The total bonded indebtedness of all units of this State is \$700,706,053 (1929, not including drain bonds and Covert road bonds not listed in Lansing).

July 1, 1929, to June 20, 1930, the State paid up bonds to the amount of \$33,736,826 but added in the same period \$80,945,051!⁴

In 1929, 1,110,697 village and city lots with assessed valuation of \$1,310,025,594.00 were returned delinquent in taxes.

A total of 9,755,470 acres of rural property with a valuation of \$226,428,925 was returned delinquent.

Total of State and local taxes returned delinquent for the same year was \$36,352,835.83. This is more than the total State tax levy on property for that year, which was \$29,500,000.

One-fourth of the acreage of the state was delinquent in taxes and when taxes were paid it was often done by borrowing the money and not getting it from income.⁵

This is enough to show where our state is headed; now for the nation.

The total annual tax budget of the whole nation in 1913 was \$2,194,000,000.

In 1930 \$10,700,000,000, an increase of 500 per cent.⁶ "From 1913 to 1930 the total expenditures of all government agencies increased from three billion dollars to fourteen billion dollars. The total amount of tax income necessary to defray the cost of government has increased 442 per cent. The really alarming thing about this is not the fact that four and one-half times as much money is being spent, but the fact that expenditures have increased more than twice as fast as the combined earnings and income of the American people."

"To be more specific, here are some startling facts. In the year 1913 the total earnings of every person in the United States from all sources was approximately 34 billion dollars. Out of this income the government took eight and six-tenths per cent, or three billion dollars. But in 1930, out of a total income of every man, woman and child in the country, which will not exceed 70 billion dollars, the government expended 14 billions, or twenty per cent. Thus, in the seventeen years since 1913, the cost of government has increased 442 per cent, while the earning power of the people has increased by less than half that percentage."⁸

To meet this rising cost of extravagance in government, they constantly seek new ways of taxing old things or old ways of taxing new things. In Michigan we have introduced in the past few years state taxation of public utilities, corporation taxes, automobile weight taxes, gas taxes, and now are proposing a state income tax, a sales tax, a cigarette tax, raising the gas tax and even attaching other assets than the property in question for tax delinquency! Each new tax means more to spend, not a lessening of other taxes.

And now a lot of people are calling for the taking over and managing of the practice of medicine and surgery by our government!

What would that do to taxes?

There has been a study recently on the cost of medical care which probably is as exact as the figures can be. It is stated to be about \$2,250,000,000 yearly. (One-third of what we spend for tobacco, one-half of what we spend for gum).⁷

That is, the government would have to take over an agency costing \$2,250,000,000 to run now, and, with the way things are done, probably costing at least twice as much under government management.

England has already found the panel system a tremendous and unexpected burden.

We are rushing along a well established course known to historians, and every added tax hastens the end. We have just as good a set-up as Rome ever had in any of its hardest falls. Rome, too, with its Kings and Emperors, had a representative type of government where officials were elected by the citizens, and more or less subject to their control.

In those days the officials spent great sums on armies of conquest, luxurious public buildings, palaces of the most costly type, etc. To retain their offices they spent still more to build up great voting power by unnecessary jobs, retainers, hangers-on, soldiers, entertainers, and subsidies in the way of distribution of grain to the needy, who miraculously grew in numbers when the system worked well. No better scheme of giving a large organized vote the whip hand has been found than by a subsidy system, as England with its dole and its medical service has found out.

One of the best methods of vote getting was by giving the most gorgeous and often the most cruel public spectacles, by which a ruler was judged rather than by his ability or integrity. Good show, big vote.

The result was that the producers from whom the taxes were wrung would reach a point where the burden was too great, and, facing death in preference, they would stage a revolution. The slate would be wiped clean and again the cycle started.

Does not this sound more or less familiar, and are we not on the same course?

There has always been a limit to what could safely be raised by taxation. Can we afford to take up State Medicine when it only means another and dangerous burden?

As loyal citizens, not as physicians, we should fight for a great reduction in government expenditures; which means less welfare work, fewer bureaus, no subsidies, fewer employees, no dole, etc. This is necessary to prevent our government experiencing the certain fate of many predecessors.

There are a number of organizations whose literature is worthy of study and who have as a part of their program the fighting of mounting expenditures in government. Physicians should look into these movements and join hands with some of them for they can do more to prevent the added burden of an unsatisfactory State Medicine than we alone can.

It is suggested that the following organizations be written for literature:

- Economy League of Michigan—
1780 Penobscot Bldg., Detroit, Mich.
- American Taxpayers League—
Munsey Bldg., Washington, D. C.
- Sentinels of the Republic—
National Press Bldg., Washington, D. C.

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5. Powell, Stanley: Magazine of Michigan, Feb., 1931.
6. Broussard, L. A.: President's Annual Address to American Taxpayers League, Jan. 1, 1931.
7. Rappleye, W. C.: Director of Study Commission on Medical Education.
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608 1ST NAT. BANK BLDG.

THE VALUE OF PERIODIC MEDICAL EXAMINATIONS*

BRUCE C. LOCKWOOD, M.D.

DETROIT, MICHIGAN

Ladies and Gentlemen of the Radio Audience:

To those who have devoted thought to the problems of health and longevity, the subject of periodic medical examinations appears to be the next big step in any program designed to decrease sickness and incapacity, increase efficiency and happiness, and further lengthen the span human life.

In the relatively recent past, the average age at death in this country has been increased to fifty-eight years. But this good showing has been brought about, first, through the enormous decrease of infant mortality, and, second, through the control of many of the acute infectious diseases, such as typhoid, smallpox, and diphtheria. Yet the incidence of early adult apoplexy, heart disease, kidney disease and digestive tract disorders goes on unabated. It is this latter group of diseases which periodic medical examinations could discover in their early stages, when the best results are obtained by treatment.

Infant disease and mortality has been decreased through the intensive study and use of preventive measures. Baby clinics have been well supported. Through propaganda and instruction, mothers have been taught to care for their babies in the right way, to protect them from infections, to feed them correctly, and methods have been found to provide them only with a pure, clean milk. The mothers have become "baby minded." But what of the mother herself?

Economically, one adult is worth many children, for the adult is the bread-winner and worker for

*A radio address delivered by Dr. Lockwood under the auspices of the Wayne County Medical Society.

the whole family. We have done much for the child but what have we done for the adult?

In the realm of infectious diseases, great improvement has been noted in the control of typhoid, tuberculosis, small pox, diphtheria, syphilis, malaria, yellow fever, hook worm, dysentery and many other infections.

The death rate from typhoid fever has dropped from 36 to 7 persons per 100,000 in the past 20 years, due to the application of our knowledge that the disease is chiefly transmitted through unclean water, milk and food, and to the use of preventative typhoid vaccine. During the Spanish American War, typhoid killed many more soldiers than did Spanish bullets, but during the World War typhoid was practically absent, due to the sanitary regulations and required vaccine injections carried out by the army medical corps. During two years with the army in France I did not see a case of typhoid.

In tuberculosis we have seen a decrease in the death rate during the past 20 years from 201 to 97 persons per 100,000. This is due to the earlier recognition, earlier treatment and more careful measures to prevent the infected person from spreading the disease to others. Early recognition is the all-important thing for the benefit of both the infected person and his associates.

Small pox vaccination is well-nigh universal and has practically stamped out the disease. Diphtheria has lost its horror due to the preventive use of toxin-antitoxin and the curative use of diphtheria antitoxin, which if used early neutralizes the poison before the patient has been badly damaged or killed.

Today, the greatest cause of poor health, incapacity, and death are those chronic diseases which the doctor sees daily in his office. I refer to such conditions as heart disease, kidney disease, too high or too low blood pressure, anemia, obesity, diabetes, tumors, various digestive disorders, goiter, tuberculosis, foci of infection in various parts of the body and so on. These are a few of the conditions which an individual may have and in their early stages be symptom free, yet conditions which may be diagnosed and which respond, as a rule, very well to early treatment. The earlier the diagnosis the better the prognosis.

These conditions cripple, impair, and deprive the individuals of their earning capacity. They may take years to develop their damage, often beginning before thirty and becoming more manifest in the forties and fifties when we find these persons with crippled hearts, damaged kidneys—damaged often beyond repair, limited in their capacity for work and in their opportunity for happiness. And most of these damages were at one time repairable and curable. The economic loss is staggering.

The report of the committee on Elimination of Waste in Industry, of which President Hoover is chairman, shows that five hundred thousand working people die every year, and that of these deaths at least half could be prevented by similar measures to those that have stamped out typhoid, small pox, malaria and yellow fever. The economic loss in this country alone from preventable diseases exceeds three billions every year, which incidentally is about five times the annual doctors' bills.

During the World War the searching draft examinations of the young men of this country disclosed an appalling percentage of physical incapacity, not illness, but physical impairment, in a class wherein one might expect the best findings.

Healthy minds are usually found in healthy bodies, and history has shown that the continued life and efficiency of a nation has invariably been in proportion to the health of the people as a whole.

I could quote statistics indefinitely showing the results of actual investigations made by life insurance companies, health clinics, and big corporations,

showing the value of periodic medical examinations, early recognition of incipient disease and early medical treatment.

The life insurance companies were the first of the big business corporations to investigate on a large scale, the results to be obtained by such periodic and frequent examinations. There was a cold calculating interest involving income and out go. One big company made such examinations on 6,000 persons, all presumably in good health. Recommendations were made for repair of apparent defects and advice given for the prevention of other defects due to bad habits or conditions of living. These people were carefully followed up for five years, and then their illness, incapacity, and death rate compared with 6,000 persons of similar ages and conditions who apparently were in as good health in the beginning but who had had no examination and received no attention other than they might seek for themselves. In these groups there were to be expected under standard mortality tables, 303 deaths, but in the examined and advised group there were actually only 217 deaths, a saving of 86 lives.

More and more of the larger business organizations are going into periodic medical examinations on a large scale, and more and more better-informed people are doing the same thing for themselves individually. The reason is that it pays big dividends in extension of life and usefulness, lessening of suffering and illness, and lessened financial losses to the individual.

Everybody recognizes that a machine properly handled and inspected will last much longer and give better service than one that is neglected. The body is a machine, the most complicated and neatly adjusted one in existence. Yet it is biological, its parts are not subject to immediate replacement, but can only be repaired or protected by slower processes.

One might ask why supposedly sane persons neglect themselves? The answer may be one of several things. Neglect and blind optimism is probably the chief cause. It is but human for one to feel that he is immune to the trouble which besets others. Another factor is lack of knowledge, the ignorance of many people regarding the workings of their "insides" is appalling. I believe that it would be a benefit to everybody if more complete and compulsory courses in anatomy, physiology and hygiene of the human body were to replace other less vital courses throughout our public schools. There are a few people who do not believe that it is as safe to place their confidence in a doctor with years of training and experience, as it is to follow, or to try some particular cult or fad. Some people practice a mistaken false economy, the definitely poor, which we have always had with us, but much more so in depressed times, can and always have obtained free medical service from the doctors.

The ethical practice of medicine of today is not a cult, a religion or a fad. It is the gradual development of a science and aims to use all that has been discovered which will aid in the prevention, diagnosis and treatment of disease. It has kept abreast of other sciences in new discoveries, methods, developments and results. The physical, laboratory and X-ray machinery of diagnosis has been developed to a point undreamed of a few years ago. But it must be understood that, as yet, the earliest detection of most of these chronic diseases offers greatest hope of staying their progress.

Consult an ethical well-trained physician at least once a year. Have a thorough examination, including those laboratory and X-ray examinations necessary for the best understanding of conditions present. Follow his advice carefully.

To those who might say that the doctors advise periodic examinations for selfish purposes, I can an-

swer that, aside from the medical and dental profession, I know of no other profession or business whose research, endeavor and teaching are aimed at the diminution and possible eradication of that from which they now receive their own livelihood.

Medical science offers more today than ever before for the prevention and cure of disease, the relief of suffering and physical incapacity and the prolongation of life. But it is of value only when and if used. The cost in time and money is less than that spent on less important things. The average annual cost of the doctor for a middle class family is 24 dollars, while the average cost for upkeep for their low priced auto is 187 dollars. For every dollar paid the doctor in this country there are paid about 3 dollars for tobacco, 2 dollars each for candy, movies and soft drinks and about 1 dollar each for jewelry, furs, radios and perfumes.

As you can see, the comparative cost of medical service is low. One of the investigations made by the National Committee on the Costs of Illness, of Washington, D. C., covered the net incomes of doctors and dentists of Philadelphia and Detroit. It showed that their average net income was much less than that of business men, not engaged in purely personal service, but that it compared more with the salaries received by less trained men, not carrying the risk of a fixed overhead. For every dollar they collected about 45 cents went out for necessary professional expenses.

Low as is the average cost of medical care, it could be made much lower if each individual would become more health-minded, give their own body better handling, have periodic frequent medical examinations, follow the advice given, and thereby prevent many of the soctly, lingering illnesses of middle age.

There are health giving qualities in good humor. Cultivate a cheerful, optimistic disposition, but do not disregard disagreeable sensations or pain, have an investigation made by an honest well trained ethical physician right away. If it is without importance he will tell you so.

For information on medical service, call on your family doctor. If you have no physician, call the county medical society.

Life is short and time is fleeting, and every thing that can be done to make our stay on this earth a happy, useful, long and successful one is worth while.

Success depends on health, without health nothing else counts very much. See your doctor at least once a year for a thorough examination, and give this house in which you live the same scientific attention that you demand for other less valuable possessions. Can you afford not to do so?

COMMUNICATIONS

TEXAS INTERESTED

Fort Worth, Texas, Jan. 20, 1932.

Dr. F. C. Warnshuis, Secretary
Grand Rapids, Mich.

Dear Doctor Warnshuis:

Dr. Anderson and I have been very much interested in the charts representing the activities of the Michigan Society, published in your January Journal, and I am writing to ask that you see that somebody informs me as to the use you have made of these charts, or expect to make of them, in addition to their publication in your journal.

Likewise, please advise whether there would be

any objection if we copied them or paraphrased them, in striving for such doubtless very well thought out and promising purposes.

In making this request, I am not unmindful that I owe you a fifteen-hundred-word article on political problems, and as soon as I get in the clear, where I can give the matter a little thought, you will get it if you still want it. The file is still on my desk, where it will remain until I am in a position to dispose of it.

Incidentally, I think I am improving in health, and I am coming to the conclusion, which I hope will be a correct one.

Thanking you in advance for the service I am asking of you, and with personal regards,

Fraternally yours,

HOLMAN TAYLOR,
Secretary-Editor.

WE MUST PATRONIZE THIS AND OTHER ADVERTISERS

At the suggestion of the Manager of the Coöperative Medical Advertising Bureau, we are writing you relative to Cocomalt and the advertising of Cocomalt in the state medical journals.

Frankly we need your support—as well as the support of every other reputable doctor. We are manufacturing an outstanding food product—Cocomalt—and are endeavoring to advertise it in an honest, reliable way.

To date Cocomalt has made encouraging progress. And we wish to have this progress continue. Sales could be greatly accelerated through the medium of sensational advertising. We prefer, however, to keep our advertising conservative and it is for this reason that we need your assistance.

When recommended by doctors, Cocomalt, in a number of instances, has acquitted itself in a creditable way. Therefore if a larger number of doctors recommend Cocomalt in cases where the recommendation is justified, it will be of three-fold advantage—to the patient, to the doctor and to ourselves.

We are enclosing a copy of the book "Facts about a Vital Food" which describes Cocomalt in detail. We are also enclosing copies of two voluntary unsolicited letters sent to us by grateful users of Cocomalt. An exceptionally large number of similar letters are received every year.

We are of the opinion that you are favorably influenced towards Cocomalt and that you would not hesitate to pass along to doctors, nurses and consumers, with whom you come in contact, the different points concerning Cocomalt that are deserving of your recommendation. Your coöperation will be of definite help to us and will cause us to feel we have been rewarded for keeping our advertising on a conservative basis.

It is a pleasure to take this opportunity to assure you of our sincere best wishes.

Very truly yours,

R. B. DAVIS COMPANY,
S. E. Van Wie,
Advertising Manager.

FOUR TYPES OF ENCEPHALITIS

Milo K. Miller, South Bend, Ind., reports four types of encephalitis recently encountered in his practice. They consist of one case each of mumps meningo-encephalitis, postvaccinal encephalitis, measles encephalitis, and hemorrhagic encephalitis following arsenical therapy (sulpharsphenamine).—*Journal A. M. A.*

SOCIETY ACTIVITY

POST-GRADUATE COURSES
THE MICHIGAN STATE MEDICAL SOCIETY
and
THE UNIVERSITY MEDICAL SCHOOL
Announce
The Fourth Annual Program
of
Courses for Graduates

PRACTITIONERS' COURSE IN MEDICINE, SURGERY, OBSTETRICS AND PEDIATRICS. June 6 to 18, inclusive. This Course consists of 72 hours instruction, 8:00 A. M. to 4:00 P. M., in Children's, Ford, Grace, Harper, Herman Kiefer, Providence and Receiving Hospitals, Detroit.

PROCTOLOGY. June 6 to 18, inclusive, 8:00 A. M. to 12:00 M. 48 hours. Receiving Hospital, Detroit.

GYNECOLOGICAL PATHOLOGY. June 6 to 18, inclusive, 8:00 A. M. to 12:00 M. 48 hours. Pathological Laboratories, Detroit College of Medicine and Surgery, Detroit.

Practitioners taking this or the preceding course may arrange to spend the afternoons in the Library, Pathological Laboratories, or in the General Practitioners' Course.

TUBERCULOSIS. April 11 to 15, inclusive. 35 hours. A five-day intensive course emphasizing the early diagnosis of tuberculosis, X-ray, clinical methods, and the medical and surgical approaches in treatment. University Hospital, Ann Arbor.

OPHTHALMOLOGY AND OTOLARYNGOLOGY. April 25 to 30, inclusive. An advanced intensive course arranged for physicians especially interested in these fields. Either or both subjects may be elected. University Hospital, Ann Arbor.

Enrollment in all courses is limited.

Courses in Special Fields available throughout the year. INTERNAL MEDICINE, PEDIATRICS, GYNECOLOGY AND OBSTETRICS, ROENTGENOLOGY, LABORATORY METHODS AND SEROLOGY.

Address: Department of Post-Graduate Medicine, University Hospital, Ann Arbor, Michigan.

COUNTY SOCIETY ACTION

This year must evidence an intensification of activity on the part of county societies. This need of action applies to every county—whether composed of ten members or of 1,000 members, the responsibility of instituting recommended undertakings rest with the County society. If our state plans and movements are to be successful and the ends sought are to be attained every County society must record action.

The House of Delegates has assigned the following tasks and duties.

1. The creation of a Public Relations Committee that shall solve and adjust local economic problems.

2. The appointment of a local medico-legal advisor who shall coöperate with the medico-legal committee.

3. Devising a county plan for the care of indigents.

4. Securing as members every eligible physician in your county.

5. Appointment of a legislative committee that will maintain intimate contact with your legislative representatives.

6. Organization of a Woman's Auxiliary.

7. Conducting Public Health Educational meetings.

8. Apply the recommendation of our State committees on Civic and Industrial Relations, Cancer, and Survey of Medical Agencies.

If every County Society undertakes to institute these activities, 1932 will be a year of commendable organizational achievements. Presidents and secretaries are urged to present these duties to their society and guide their institution.

The following state Society Activities expense pro-rates per member as follows:

Journal	\$ 4.12 per member
Legislation .....	.84 per member
Committees .....	.55 per member
History .....	.49 per member
Council .....	.60 per member
Society expense	1.26 per member
Medico-legal	2.51 per member
Post Graduate .....	.71 per member
Annual Meeting .....	.51 per member
A. M. A. Delegates.....	.13 per member
Salaries, Stenographers, Rent, Power, Light, Telephone, Postage, Printing	3.61 per member
Total	\$15.33 per member

You personally receive \$15.33 of activities for your annual dues of \$10.00—50 per

cent dividend upon your dues. These activities produce personal benefits for you. The \$5.33 of expenses that are incurred over and above your dues are defrayed by advertising, interest on investments and contributions. Were these earnings not possible your annual dues would have to be at least \$16.00 per year. Members receive more value than what their dues defray.

SURVEY OF MEDICAL AGENCIES

Pursuant to the call the House of Delegates met in special session on January 27, 1932. Sixty-seven out of a possible 80 delegates attended and constituted a splendid representation of the entire membership. After organization, the House went into executive session.

Dr. W. H. Marshall, Chairman of the special committee on the Survey of Medical Agencies, presented a forty-five page report. The report reflected a most excellent preliminary investigation made by the committee. It was received with commendation.

Terminating the executive session the following action was recorded:

1. That the report be adopted.
2. That the committee be continued.
3. That the outlined survey be instituted.

4. That the committee be instructed to report its progress at the September annual meeting.

5. That the Council be requested to appropriate funds to defray the committee's expenses.

The committee, in its report, made the following recommendations which were approved:

1. That any physician becomes ineligible for membership or continuance of his membership if he associates himself with any group, clinic or hospital that provides medical care to individuals who are financially able to assume reasonable charges for his medical care and where such groups, clinics or hospitals do not permit its medical staff to determine the individuals eligible for free service.

2. That this House of Delegates transmit to the University Regents and to the Administration Committee of the University Medical School and Hospital its disapproval of any attempt or activity that has for its purpose the taking over, by medical

faculty or staff members, the administration of any clinic or hospital in the state. That we protest the use of the University Hospital for the care of patients beyond the number required for teaching purposes.

3. That each county society appoint a Public Relations Committee for the study, solution and adjustment of local problems.

4. That legal proceedings be instituted against corporations now practicing corporate medicine in an endeavor to terminate corporate practice.

The special committee will now perfect a survey organization and press forward its work in obtaining truth finding facts upon which to base indicated recommendations and policies.

MINUTES OF THE JANUARY MEETING OF THE EXECUTIVE COMMITTEE OF THE COUNCIL

The Executive Committee of the Council met in Jackson on January 26, 1932, with the Chairman Dr. Corbus, presiding and the following members present:

George L. Le Fevre
Henry Cook
Henry R. Carstens
James D. Bruce
Carl F. Moll, President
J. M. Robb, President-elect
F. C. Warnshuis, Secretary

1. The Secretary reported that the Kalamazoo Academy and the Kalamazoo Convention Bureau recommended the dates of September 13, 14 and 15, 1932, as most suitable for the holding of our Annual Meeting. After discussion, upon motion of Cook-Le Fevre, the Executive Committee approved and designated these dates for our 1932 Annual Session.

2. The Secretary reported in a general way the tentative plans that had been adopted by the Scientific committee for the 1932 scientific program.

Upon motion of Le Fevre-Cook, the Secretary was instructed to advise the section officers that when conducting the meetings of their sections they must not and shall not change the order of the scientific programs and that the announced speakers shall appear at the time and in the order in which they were announced.

3. The Secretary reported that he had received bond in the amount of \$25,000 covering the Treasurer, Dr. A. V. Wenger; he further reported that the transfer of the securities held by Dr. Rogers to Dr. Wenger had been consummated and that he held in the files of the Society a receipt from Dr. Wenger for these securities and bonds.

4. The Secretary requested instructions in regard to the sending of the Journal, and the according of medical defense to the delinquent members of the society to whom the Council had been sending the Journal and according protection during 1931. After considerable discussion the following motions were made by Le Fevre-Bruce:

1. That because of the rapidly increasing expenses occasioned by the increasing number of threatened suits and suits the Society is unable to accord medical protection to delinquent members, and that the Secretary be instructed to advise by letter each delinquent member that after

February 15, 1932, medico-legal protection would be discontinued to all those who are in arrears in their dues.

2. The Secretary was directed to continue sending the Journal to delinquent members not as a precedent but solely to evidence the willingness on the part of the Council to accord all those privileges of organized medicine to members, who by reason of the financial depression, find it embarrassing to continue their medical affiliation with their county and state society.

The Executive Committee adjourned at 9:45 p. m.
F. C. WARNSHUIS,
Secretary.

MINUTES OF THE MEETING OF THE SCIENTIFIC COMMITTEE

The Scientific Committee met in Jackson at 6:00 P. M. on January 26, 1932.

The chairman and secretaries of the six scientific sections were in attendance.

1. The Secretary announced that the House of Delegates at the Pontiac meeting referred to the scientific committees the question of a change in the schedule of the scientific sessions and requested the committees to consider the holding of one or two combined sessions for the presentation of scientific papers and discussions.

The committees devoted considerable time in a full and free discussion of plans and subjects for the scientific meetings.

2. Upon motion of Miller-McKean, the scientific committee resolved that for the 1932 annual meeting two mornings would be devoted to sectional meetings and two afternoons would be devoted to combined scientific sessions in which all the sections would participate.

3. The committee then entered into a long discussion of speakers and subjects for the general sessions and after mature deliberation formulated the following program:

That on the first afternoon the following subjects would be presented:

Allergy
Acute Perforating Ulcers of the Stomach
Pneumonia
Neoplasms of the Breast
Injection Treatment of Varicose Veins

The program for the second afternoon to be composed of presentation of papers on the following subjects:

Posture
Otitismedia
Some phases of Heart Disease
Nutrition
Contraceptive Measures

4. The committee then discussed as to whom would be desirable speakers to cover these subjects and several nominations were made. It was duly moved that the secretaries of the sections on Medicine, Surgery, Gynecology and Pediatrics would write to these nominees to secure their acceptance of an invitation to so participate in our program.

5. Upon motion duly made, the section officers will assume the responsibility of selecting the subjects and speakers for the morning meetings of their sections.

6. Upon motion duly made, the preliminary program for the general session and the sectional sessions shall be in the State Secretary's hands not later than July 10, and the final completed program shall be in the State Secretary's hands not later than August 10.

The committee adjourned at 8:45 p. m.
F. C. WARNSHUIS,
Secretary.

PROCEEDINGS

SPECIAL MEETING OF THE HOUSE OF DELEGATES

MICHIGAN STATE MEDICAL SOCIETY

January 27, 1932

Hotel Hayes

Jackson, Michigan

A Special Meeting of the House of Delegates of the Michigan State Medical Society was called to order, pursuant to call, at the Hayes Hotel, Jackson, Michigan, at ten o'clock on the morning of January 27, 1932, with the Speaker, Henry J. Pyle, presiding.

The Speaker: Will you come to order?

We will listen to the report of the Credentials Committee. Dr. Hasley.

Dr. C. K. Hasley (Washtenaw): The Credentials Committee wishes to report that there are fifty-five duly qualified delegates enrolled. I move that the registration slips Dr. Warnshuis has constitute the roll call.

The motion was regularly seconded, was put to a vote and carried, and the roll call was as follows:

H. J. Pyle, Kent; F. C. Warnshuis, Kent; C. T. Ekelund, Oakland; J. G. Crownhart, Madison, Wis.; F. W. Garber, Muskegon; A. L. Callery, St. Clair; C. K. Hasley, Washtenaw; F. J. Kilroy, Wayne; T. E. Schmidt, Jackson; G. J. Curry, Genesee; F. E. Reeder, Genesee; H. G. Huntington, Livingston; G. C. Penberthy, Wayne; C. R. Keyport, Crawford; Bert U. Estabrook, Wayne; W. H. Marshall, Genesee; F. A. Baker; L. G. Christian, Ingham; W. A. Manthei, Houghton; V. H. Vandeventer, Marquette-Alger; A. G. Sheets, Eaton; W. L. Godfrey, Calhoun; L. J. Garipey, Wayne; E. D. Spalding, Wayne; A. E. Catherwood, Wayne; L. J. Hirschman, Wayne; H. W. Plaggemeyer, Wayne; P. D. Amadon, Monroe; H. B. Zemmer, Lapeer; W. Ellwood Tew, Gogebic; J. D. Curtis, Wayne; J. A. Wessinger, Washtenaw; J. D. Brook, Kent; A. C. Biddle, Wayne; G. H. Southwick, Kent; A. V. Wenger, Kent; B. M. Mitchell, Oakland; J. E. Davis, Wayne; B. L. Connelly, Wayne; L. T. Henderson, Wayne; E. C. Baumgarten, Wayne; L. O. Geib, Wayne; J. L. Chester, Wayne; O. G. Johnson, Tuscola; W. C. Ellet, Berrien; E. L. Foley, Alpena; H. A. Luce, Wayne; A. H. Whittaker, Wayne; R. A. Springer, St. Joseph; F. T. Andrews, Kalamazoo; W. C. McCutcheon, Cass; Dean C. Burns; H. E. Perry, Luce; L. W. Switzer, Mason; T. P. Treynor, Mecosta; J. H. Andries, Wayne; I. W. Greene, Shiawassee; J. T. Connell, Genesee; W. S. Reveno, Wayne.

The Speaker: We will listen to the reading of the call of this Special Meeting.

The Secretary read the call to the meeting.

The Secretary: Mr. Speaker, may I ask the indulgence of the House for a moment to present to the House Dr. R. G. Leland, Director of the Bureau of Medical Economics of the American Medical Association? Dr. Leland. (Applause.)

May I also present to you the Executive Secretary of the Wisconsin State Medical Society, Mr. George J. Crownhart of Madison, Wisconsin? (Applause.)

The Speaker: If there is no objection on the part of the assembly, these gentlemen will be given the privilege of the floor during this meeting.

The Chair believes this session will have to do largely with medical economics, and as a result the Chair would entertain a motion that we go into executive session.

Dr. J. D. Brook (Kent): I move that we proceed in executive session.

The motion was supported by several, was put to a vote and carried.

The Speaker: As we go into executive session, I would like to appoint as Sergeants-at-Arms, Dr. Ekelund of Pontiac and Dr. Wenger of Kent. They will poll the House so that only those who are members will remain.

Pursuant to the polling of the House by the Sergeants-at-Arms, the House resolved itself in executive session.

The Speaker: The House is now in executive session.

We will now listen to Dr. Burton R. Corbus, Chairman of the Council.

Dr. Burton R. Corbus (Kent): Mr. Speaker, and members of the House of Delegates: The Council desires me to announce that in response to a feeling on the part of a considerable number of men, particularly those men in the industrial centers, that some lessening of the expense of the State Society might obtain in this period of depression; that they have carefully gone over the matter, giving great consideration to what might be done and still the work of the Society be carried on in a satisfactory manner, and the Council has decided that in addition to the arrangement which was earlier made for the men to give notes for their dues that for this year a rebate of \$2.50 on the dues shall be made. The question had come up as to the possibility of making a reduction in the dues. That was impossible under our By-laws, but this plan has the precedent of a rebate in dues which we made to those men who went to the War.

To do this, and to have our very large number of activities continue, it will probably be necessary to draw on our reserves, but we hope to keep it down by lessening some of our activities and by a great effort at economy to make the loss as little as possible.

We have very carefully scanned every department, making reductions in our budgets as close as we can. Specifically, the Secretary has agreed to accept a reduction in his salary of \$2,500 a year, and the Editor of \$1,000. We are lessening our space in the offices and in many other ways are trying to cut down in this period of necessary economy just as much as we can.

Certain expenses we anticipate will increase, notably that of the legal defense fund. This year it cost us \$10,000 for legal defense, which is way over what is being paid in. May I call your attention at this time to some charts that are here for your inspection, showing, first, our increase in activities since 1913 to 1931 and 1932, and calling your attention also to what the State has given its members in benefits. You will notice that \$14.33 were expended this year and the difference between that and the dues was made up by advertising, interest on our investments, and a certain amount of money we obtained from the Couzens Fund. The largest part of those expenses was expressed by the amount it cost us to run the Journal and run the Medico-legal Committee. We hope, in spite of this rebate, to carry on so you will obtain almost as much as you have ever obtained from the work of the State Society.

Mr. Speaker and the House of Delegates, may I wish, for myself and the Council, great success in this very important subject which is up today. Organized medicine must take a lead in this evolutionary medical problem which is now under way and is so very disturbing. The state of Michigan has ever taken a prominent place in forward looking movements, and we are being watched today as to our deliberations. I have great confidence and great hope that a great deal is to come out of this meeting.

The Speaker: We will now receive the report of the Special Committee, which has been appointed by the President on the Survey of Medical Agencies, Dr. Marshall being Chairman, and the other members of the Committee being Dr. Estabrook, Dr. Baker, Dr. Christian, and Dr. Gorsline.

Dr. W. H. Marshall presented the report of the Special Committee on the Survey of Medical Agencies.

The Speaker: Gentlemen, you have heard this report.

Dr. W. C. Ellet (Berrien): I move that this excellent report be adopted by this House of Delegates.

The motion was regularly supported, was put to a vote and carried.

The Speaker: The report is adopted.

H. A. Luce (Wayne): I move that the sincere and heartfelt thanks of this House of Delegates assembled in special session be expressed to this Committee for their untiring labors and hard work.

The motion was supported by several.

The Speaker: Gentlemen, that motion is carried if there is no objection on it.

J. D. Curtis (Wayne): I would like to ask the privilege of the floor for about three or four minutes for Dr. Sandweiss of Detroit, who has some interesting data that should be included in Dr. Christian's report. Dr. Christian said he had no details from Wayne, and if the House is willing I would like to suggest that this report might be augmented by what Dr. Sandweiss has to say.

The Speaker: If there is no objection on the part of the assembly, I will give the gentleman the privilege of the floor.

Dr. David J. Sandweiss read his prepared paper.

Dr. Sandweiss: If there are any questions or any figures I can give you, I should be glad to answer them.

The Speaker: Is there any further business to come before this meeting?

Dr. J. D. Curtis (Wayne): It wasn't clear to me, at least, whether or not this work which Dr. Sandweiss has reported is part of the work of the Committee.

Dr. W. H. Marshall: No, it was not reported.

Dr. A. H. Whittaker (Wayne): I should like to take this opportunity, Mr. Speaker, of thanking this Special Committee for the very wonderful report which they have made today.

I think one of the things that points out the importance of this survey is the fact that this plan is gaining recognition in other states, and if I may take just a moment I would like to mention what the Wisconsin Medical Society is planning on doing. This is taken from their President's Page of a recent number of their Journal. It is entitled, "Distribution of Medical Service."

"Pursuant to a resolution passed in the last House of Delegates, the President has appointed Dr. Gilbert Seaman, Chairman, Dr. D. E. W. Wendstrand, and Dr. Gunnar Gundersen, a committee of three to pursue the study of the distribution of medical service in Wisconsin. In its broadest aspects, the purpose of such an undertaking is an attempt to formulate a plan which in its operation shall solve what Dr. Olin West, Secretary of the American Medical Association, has designated as the greatest problem in American medicine, namely, to make available to all the people, everywhere, all that is best in medical service at a price commensurate with the ability of the patient to pay.

"In an attempt to collect and systematize the data from which the desired conclusions may be drawn, the committee will probably find itself essentially a fact finding body. It will require a study of the whole subject of the distribution and cost of medical service from several points of view—that of the physician, that of the layman, of such agencies as have been employed in this state to render to the people a service which they do not or cannot pay for, and possibly a fourth in a study of what other states have attempted in this matter.

"What are some of the facts which this committee will ascertain? First, the distribution of physicians in the metropolitan, in the urban, and in rural areas. Where are the 2,800 physicians of the state located? Are there any people

so situated that the services of the physician are not readily available to them? Are facilities in the way of hospitals, laboratories and libraries within easy reach of those in need of them? Are medical fees too high? Are they too low? What should be the income of a physician, taking into consideration his investment in time, money, and equipment, his hours of labor and the responsibilities which he assumes as compared with men in other professions or in business?

"Is the public availing itself of such medical service as the profession is ready and anxious to afford? If not, is it because the service is not available, because of lack of appreciation of the service, or because of the cost of the service? What proportion of the population of the state of Wisconsin receives an income at or below the sum determined upon as the minimum required to maintain an American standard of living? What is the average cost of medical service to a family of five in this state? Can such cost be met out of an income below the minimum living wage? Is it possible to distribute the cost of medical service so as to lighten the burden and enable the public to avail itself of the service and at the same time assure the physicians of a fair income?

"The third topic of study is the gratuitous medical service afforded by official, semi-official, and lay organizations in Wisconsin. What kinds of service do they afford, to how large a number of people and what class of people? What is the total cost of such service? Is some of the work carried on by such organizations, service that should be legitimately in the hands of private practitioners? Are the state, municipalities, and counties, through various organizations and institutions, invading the field of private practice, and is such invasion a response to a demand on the part of the public for a service which the individual cannot afford for himself? To what extent and along what lines is industry entering the field of medicine? Are public clinics, dispensaries, private clinics, groups, contract practice, a means employed to solve the problem of the distribution of cost of medical service, and if so to what degree do they accomplish their end?

"The Budget Committee of the Council of the State Medical Society, realizing that this survey will require a great deal of time and much more work than the members of the committee can personally perform, has included in the suggested budget for the coming year the sum of \$1,800 to be used by the committee as it may deem advisable in the pursuit of its work.

"It is to be hoped that every doctor in the state will co-operate with this committee to the fullest extent and that every physician will promptly and to the best of his ability respond to every request made of him by the committee for data and statistics that will promote the study. It is only as we all do our several parts that we can hope to obtain reliable and sufficiently complete data to enable us to draw helpful conclusions."

I hope our Society will be able to coöperate in the fine work which has been going on in the way the state of Wisconsin has been rendering coöperation.

To further point out the recognition which this work is receiving, I should like to quote from the January issue of the Illinois Medical Journal. The article is entitled, "A Valuable Survey of Medical Charities by the Michigan State Medical Society."

"We are much interested in a special meeting of the House of Delegates of the Michigan State Medical Society that will convene in January, 1932. At the last annual meeting of their House of Delegates there was appointed a committee on investigation and survey of medical service in Michigan. This committee has had several meetings and are now laying the ground for a most careful and scrutinizing survey of all agencies that are now endeavoring to render some type of health service in the form of clinics, foundations, hospitals and lay activities. The committee contemplates exposing the overlapping of many of these agencies, the disregard to the individual's right to such free service and the other evils that are increasing with all these types of service.

"The committee proposes to make a most intensive survey of the entire state. The work is expected to take about a year and will entail the expenditure of something like \$25,000 or \$30,000. Part of the money has been already raised. There will be no trouble to secure the balance. It is the belief of the Michigan State Society officials that their findings will be of service and value to other states and that possibly they will be able to start a reform that will spread throughout the nation.

"Of course, the committee is running into opposition with those within the ranks as well as those who are in political offices or who pose as public benefactors. This was to be expected at the outset but we are confident the committee will not be swerved from the objective they set out to reach."

In following out the line of reasoning that this work of ours has some national recognition, I would like to present a resolution. Inasmuch as the A. M. A. will meet in April and this is the only opportunity I will have, I should like to ask your consent to introduce the following resolution:

Dr. A. H. Whittaker presented his prepared resolution, which was turned over to the Secretary.

Dr. Whittaker: I move that this resolution be adopted by this House of Delegates.

Dr. H. A. Luce (Wayne): I support it.

Dr. L. J. Hirschman (Wayne): May I ask the Speaker at this time if he will extend the privilege of the floor to Dr. Leland of the American Medical Association, who can tell us, through the Public Health, whether any such survey is in progress now.

Dr. R. G. Leland (Director of the Bureau of Medical Economics of the American Medical Association): I happen to know, Mr. Chairman and members of the House, something about this, but I am not privileged to say just what I do know about it.

However, while I am on my feet, may I say that both Michigan and Wisconsin should be very proud to be the leaders in making a survey of this type. This is the thing which is necessary throughout the country. If the medical profession is to meet the criticisms that have been leveled at it through the popular press, it should be done in such a careful way that no attempt at conclusions is made until every possible contributory bit of evidence and data is at hand. It seems to me, furthermore, that until you include such a comprehensive study in your profession, as you plan on the agencies outlined in this very ambitious work which your Committee has undertaken, your study will not be complete.

Not long ago I had the privilege of talking with some of the men in Wisconsin, and their plan is to do that part first. It is merely a matter of choice. Therefore, there are many things which I believe are of exceedingly great importance. You know about your own profession, whether the number of physicians in a community is too great or too small; whether their income is handicapped by these things which the community has already pointed out and which along this line they are going to continue to work. There are many things outside of these specific and local problems which we are undertaking, and as soon as that data is available from our headquarters just as soon as possible it will be made available to all state societies.

We hope you will feel perfectly free to call on the Bureau of Medical Economics of the American Medical Association for any help which we may be able to give you.

The Speaker: Is there any further discussion on Dr. Whittaker's motion?

Member: I want to know whether this study has been started, and what it has started. If so, the resolution is superfluous. If they have already started that study, it would be rather silly to start this.

The Secretary: It hasn't been started.

Dr. W. H. Marshall: I did prepare a paragraph on this thing and then destroyed it. As you probably know, the American Manufacturers Association went on record against national insurance and in December, I think it was, in Chicago the meeting of the American Federation of Labor also went on record as being opposed to it. I felt that inasmuch as the Manufacturers Association was opposed to it, and the American Federation of Labor was opposed to it, it wasn't an immediate problem and therefore I destroyed the paragraph, which was rather an extensive one.

The Speaker: Is there any further discussion, gentlemen? All in favor of adopting this resolution and the motion of Dr. Whittaker say "Aye"; contrary, "No." The motion is carried.

Gentlemen, at this point I would like to give the privilege of the floor to Mr. Crownhart from the state of personal liberties, Wisconsin. We received

some flowers in print from Illinois. Let's have them in print from Wisconsin.

Mr. J. G. Crownhart (Madison, Wis.):

I think in the nine years I have been associated with the work in Wisconsin, I can best express what we are trying to do by a rather mixed metaphor I heard the other night. I was in a meeting of the Calumet Society in northern Wisconsin. They had present one of the local politicians who expressed the thought in the course of a general conversation, that government had gone a bit too far, and he said that in his effort in governmental work, as he represented the people of that county, he was going to rest on his oars and keep his ear to the ground. (Laughter)

I think possibly the tendency in Wisconsin, and possibly in some other states, is that we have all been keeping our ears to the ground and resting on our oars.

I recognize the work you are doing, and particularly the work we are doing, is far more in advance of the effort to keep the oars going while we are working. Thank you. (Applause)

The Speaker: Now your Speaker would like to have the privilege of the floor in asking for information. A thing that has pained me in the past, which has happened to many of you as individuals, are the garbled reports of the press. The Speaker is going to ask what is going to be given to the press. Is someone going to step on him or coerce him into saying the right thing? I wonder through what channel this is going to the press? How is this going to be reported? Is it going to be fair? Is it going to be garbled? So often it is garbled.

Dr. L. G. Christian (Ingham): Inasmuch as Dr. Marshall is Chairman of this Committee, and is more familiar than any of the rest of us, I would like to move that Dr. Marshall be the official spokesman to the press in giving out any information.

Dr. L. J. Garipey (Wayne): I have no idea that Dr. Marshall will handle the burden himself. I would like to make a motion that a committee of three be appointed to handle the publicity of this meeting.

Dr. L. J. Hirschman (Wayne): I believe we have adopted the Committee's report. The Committee specifically recommend in their report that all publicity emanate only from the Committee, and inasmuch as the Chairman of the Committee is the mouthpiece of the Committee, this is all out of order.

The Speaker: Dr. Christian's motion is before the House, which is strictly in line with what you have said.

Dr. W. H. Marshall (Genesee): My own feeling is that there should be no publicity at all until we know more about it. The survey is under discussion, and that is all. We have arrived at no conclusions, and I think it very immature to go before the public with any statement at this time. I don't feel like making any such statement.

Dr. W. C. Ellet (Berrien): I think about three years ago in this very room discussion on something like this was brought up on an economic question, and several hours later the newspapers all came out with the statement that doctors were against charities and clinics.

I think Dr. Marshall's suggestion that no information be given out at this time is excellent until we know more about it, because they will twist it the way they want to in order to make news out of it.

Dr. O. G. Johnson (Tuscola): I think it will be impossible to keep from the press any news regarding this meeting. We know that the press in the state is hostile to the medical profession.

My suggestion would be that some member of the Committee, or three members of the Committee,

be authorized to write a report and request the press to print it verbatim, and not leave it to any reporters because if you do you will not get the information we wish to have go to the public.

The Speaker: Whether anything is printed or not? Do you wish to withdraw your motion, then, Dr. Christian?

Dr. Christian: Yes.

Dr. A. C. Biddle (Wayne): May I ask if we have done everything that is necessary to promote this work? I don't see what we have done. We haven't continued our Committee. The Committee simply asks to be continued. I think we ought to take some action. When we adjourn today, we adjourn sine die. The Committee ought to be reappointed.

The Speaker: Do you wish to put that in the form of a motion?

Dr. Biddle: I would like to put the motion that that Committee be instructed to continue its work, have the guidance and everything else that is necessary, and report not to this House of Delegates but to the House of Delegates. You and I may not be here, but we have to instruct what this Committee is to do.

The Speaker: Have you heard Dr. Biddle's motion?

Dr. Biddle: I just made a motion in effect that this Committee be authorized to do such research work as necessary, and that it shall report to the House of Delegates at the next meeting, if that is proper.

Dr. W. C. Ellet (Berrien): I think the Committee in its summary state that it should be carried on.

Dr. Biddle: The mere adoption of that report is not instruction.

The Speaker: This is a Special meeting to hear this report. In order to entertain anything like that, we shall have to have a vote on it. I don't believe this assembly, unless you vote by a two-thirds vote, can take up any motions of this kind. I don't think that would be constitutional.

Dr. E. C. Baumgarten (Wayne): Dr. Biddle's motion pertains to the question at hand, and I don't think you need any special ruling on that. It is to bring up some outside business not pertaining to the call of this meeting.

The Speaker: The Chair is willing to receive an objection. If there is no objection on the part of the assembly, we will take up Dr. Biddle's motion.

Dr. Baumgarten: I support it.

Dr. J. D. Brook (Kent): Is it proper to instruct the Committee while we are in Executive session? Shouldn't the Executive session adjourn and then instruct the Committee while we are in ordinary session?

Dr. Biddle: I accept that.

The Speaker: The Chair will rule we are in ordinary session.

Dr. L. J. Hirschman (Wayne): I move that we arise from Executive session.

The motion was regularly supported, was put to a vote and carried.

Dr. Biddle: I repeat now, Mr. Speaker, my motion in regular session.

Dr. Baumgarten: I second it.

The Speaker: That the Committee be continued and be instructed to report at the next meeting of the House of Delegates. Is there any discussion, gentlemen?

Dr. Marshall asks for information: "From whom do we receive our orders?" From the House of Delegates.

The motion was put to a vote and carried.

The Speaker: The motion is carried.

Dr. Baumgarten: I think right along with Dr.

Biddle's idea goes the idea of funds, which I think is quite important. The Committee mentioned a matter of \$5,000, which I think should have a little discussion, a little attention at this time.

To bring the matter before the House, I would move you, Mr. Speaker, that the House of Delegates authorize the appropriation of \$5,000 for meeting this work.

The motion was supported by several.

The Speaker: Gentlemen, you have heard from Dr. Baumgarten. Do you wish to discuss that motion, Dr. Corbus?

Dr. Burton R. Corbus (Kent): What our present financial status is?

Dr. Biddle: That, and whether we may instruct you, too.

Dr. Corbus: You may request but not instruct. For your information, however, I will say to you, and you may ask any other questions from The Secretary who has things on his tongue's end in a financial way better than I have, that we have in our funds \$13,760 for the Society at the present time. That is in our surplus fund. Our bonds have not defaulted, but they have sunk very materially, and when I say \$13,760 I have reference to December 31. Having just spoken to my banker about a bond that two months ago was worth \$105 and I found is now \$82, I don't know what our worth is today.

Are there any other questions that anybody would like to ask further?

Dr. Baumgarten: How does the Council feel disposed toward this appropriation?

Dr. Corbus: The Council feels that this is so important that they would go as far as our finances would permit and still allow us to go on with the general routine of the Society. We are extremely sympathetic with the whole thing.

The Speaker: Is there any further discussion of Dr. Baumgarten's motion?

The motion is that the Council be requested to appropriate \$5,000 to aid this Committee in their investigation.

Dr. E. D. Spalding (Wayne): The report calls for \$2,500. (Cries of "No")

The Speaker: Is there any further discussion, gentlemen?

The motion was put to a vote and was carried.

Dr. W. C. Ellet (Berrien): What I was going to ask was to have The Secretary read over again that part about the appropriation.

The Secretary read the recommendation of the Committee on Page 38 of the report.

The Secretary: The Committee stated in regard to funds that they were unable to determine approximately what the survey would cost, but suggested that probably the funds might be obtainable from some other sources, and that only approximately \$2,500 of the Society's funds would be required for the Committee for organizational purposes and securing these other agencies' assistance and contributions. The Council, after the Pontiac meeting, appropriated to the Committee \$300 for its work up to the present time, and the Committee has expended something like \$200 of that \$300 appropriation.

The Speaker: Is there any further business? Are there any matters you gentlemen wish to bring up in connection with this survey? If not, a motion to adjourn will be in order.

Dr. Ellet: Before that adjournment, do we have a session this afternoon?

The Speaker: No, this is the final session.

On motion regularly made and seconded, it was voted to adjourn at twelve-ten o'clock.

F. C. WARNSHUIS,
Secretary.

MINUTES OF THE MEETING OF THE JOINT COMMITTEE ON PUBLIC HEALTH EDUCATION

Ann Arbor, February 4, 1932

Present: President Ruthven, Chairman; Drs. W. R. Davis, Olin, Randall, Bruce, A. C. Thompson, Sinai, Jackson, Haynes, Huber, Sollar, Henderson, and Fisher; Miss Delavan of the Department of Health; Miss Josephine Davis of the American Red Cross; Mr. A. W. Thompson of the Department of Public Instruction; and Mr. Werle of the Tuberculosis Association.

1. Minutes of the meeting held in Ann Arbor on June 1, 1931, were read and approved.

2. Report of the field work, by Dr. Soller. Dr. Soller reported that of 142 schools visited, 138 schools were put on the health education program.

3. Report of the office administration, by Dr. C. A. Fisher. At the request of the Secretary, Dr. Fisher reported on a study which he has been carrying on as to the number and relative efficiency of the health lecture assignments. His report is as follows:

	1930-1931	1931-1932
Total number of high schools in which lectures were scheduled	101	138
Total number of health lectures scheduled in these high schools	464	505
Health lectures given to date (Feb. 4, 1932)		272
Number of lectures missed due to failure of doctors to appear as per schedule		53
Number of reports on health lectures classified as good		86 (79%)
Number of health lectures classified as fair		15 (13%)
Number of health lectures classified as poor		9 (8%)

Following the presentation of the data given above, Dr. Fisher read a number of communications of a commendatory nature and also a number of communications that were critical.

4. Report on newspaper publicity, by Dr. Bruce. This report in detail, as submitted by Dr. Bruce, was ordered placed on file.

5. Treasurer's report. Dr. Warnshuis, treasurer of the Joint Committee, was not present at the meeting but sent in his report covering the period included between December 29, 1930, and December 29, 1931. According to this report the balance on hand on December 29, 1931, was \$862.41.

6. Report on next year's program, by Dr. Henderson. This report included a summary of the growth of the health education program up to date. Special attention was called to the fact that this year the number of schools in which the program is carried on and the number of lectures given exceeds that of any other year in the history of the work. Also, special attention was directed to the fact that of the lectures given 80 per cent were classified as good to excellent and only 8 per cent were classified as poor. Dr. Henderson gave in brief outline his ideas as to the desirability of a closer coöperation between the Joint Committee and the State Course of Study program. He also made special mention of the desirability of coöperating with city health programs, as conducted through local organizations.

6. New business. (a) It was moved and carried that the Secretary communicate with the Treasurer asking that statements be sent to the various member organizations, asking for the payment of the contributions agreed upon at the meeting held on January 22, 1931, at which time it was moved

and carried that in view of the fact that there was at that time a surplus in the hands of the Treasurer, contributing members be asked to pay hereafter one-fourth of the amount previously paid in by the respective member organizations, this sum to be expended for such purposes as may be approved by the Committee.

It was moved and carried that the Committee on Publicity and the Committee on Lecture Outlines be authorized to draw upon the treasury for such sums as are necessary for publicity and lecture outline purposes, within the limits of the amount on hand.

(b) In connection with Dr. Soller's report on Field Work, it was recommended that, in securing speakers for the high school health education programs, the field worker, after consulting the Secretary of the local County Medical Society, make arrangements directly with the doctors who are willing to take part on the health education program, as regards specific assignments.

7. After some discussion as to the desirability of holding one, two, or three meetings a year in the future, it was moved and supported that the formal annual meeting should be held, whenever possible, in conjunction with the State Medical Society, and that additional meetings be subject to call by the Secretary, in case contingencies should arise making such meetings necessary.

8. Motion to adjourn.

W. D. HENDERSON, *Secretary*.

REPORT OF CIVIC AND INDUSTRIAL RELATIONS COMMITTEE

The Civic and Industrial Relations Committee met in Jackson, Michigan, at the Hayes Hotel, at 12:15 P. M., January 27, 1932. Doctors Curry, Geib, Kudner, Riley, Penberthy, and Collisi were present. Doctor Moll, President of the Society; Doctor R. G. Leland, Director of the Bureau of Medical Economics of the American Medical Association; and Doctor R. H. Denham of Grand Rapids were visitors.

Doctor Leland outlined the progress of the study of health and accident insurance proof blank procedures which is being conducted on a nation-wide basis. He stated that, according to information received from the State Commissioners of Insurance, there appears to be no statute nor insurance department regulation in any state requiring that physicians shall furnish specific information for such claim proofs. Many of the statutes do provide that there shall be due proof of loss but the interpretation of due proof of loss is left largely to the insurance companies. Recently Doctor Leland conferred with Mr. Robert K. Metcalf, Manager of the Claim Department of the Connecticut General Life Insurance Company, who has been made chairman of the special committee appointed by the International Claim Association, and two other large insurance membership organizations have been circularized for data. Mr. Metcalf has begun a study of the problem with a point of view sympathetic to the medical profession on many points. He hopes that the claim proof blanks may be changed to a shorter form; however, he can give no assurance that the insurance companies will be willing to pay a fee of \$2.00 for each blank filled out. He has assured Doctor Leland that he will do everything possible to bring about an amicable agreement. Dr. Leland expects to have a more detailed report for the Meeting in New Orleans.

It was suggested by Dr. Penberthy that the committee meet jointly with the Attorney and Chief Adjuster of the Detroit Automobile Club, together with Mr. L. J. Cary of the Michigan Mutual Liability Company, for a discussion of the highway accident problem in which physicians and hospitals are meet-

ing difficulty and delay in securing settlement for their services.

Meeting adjourned at 2:30 P. M.

Respectfully submitted,

HARRISON S. COLLIST, *Chairman.*

JUST SOME "DO'S AND DONT'S"

1. Do pay your dues before April 1, to obtain the \$2.50 rebate for 1932.
2. Don't argue with a patient or his attorney who threaten suit. Refer the problem to the Medico-legal committee.
3. Do have X-rays of all fractures, before and afterwards, that you attend.
4. Don't miss any of your County meetings.
5. Do offer to serve on a local committee and do work when so appointed.
6. Don't fail to patronize our Journal advertisers.
7. Do urge prophylactic measures for your patients and do administer them yourself.
8. Don't overlook urging periodic physical examinations.
9. Do read Society Activity items every month.
10. Don't increase your expenses. Cut out non-essentials and save something each month.
11. Do plan an hour's reading every day.
12. Don't forget to file your income return by the 15th.
13. Do agree to contribute a paper or case report for your local program.
14. Don't knock but boost your local and state organizations.
15. Do urge the non-member to join. Invite him to your next meeting.
16. Don't slump. Keep on working. We can beat this depression.
17. Do induce your wife to join the local auxiliary.
18. Don't neglect being a Fellow of the A. M. A. that protects your national interests and sends you the best national medical Journal.
19. Do boost everlastingly all your society activities.

F. C. W.

AVITAMINOSIS: III. SPECIFIC EFFECT OF VITAMIN B ON GROWTH AND LIPID METABOLISM: LIPEMIA AS SYMPTOM COMPLEX IN THIS AVITAMINOSIS

For the past four years Barnett Sure and Margaret Elizabeth Smith, Fayetteville, Ark., have been searching for a symptom-complex in vitamin B deficiency as may be evidenced by the blood chemistry picture. Their results, however, were, in the main, negative. They have considered of little clinical importance the anhydremia and the increase in the nonsugar reducing substances of the blood, which were frequently encountered. They feel, however, that their present observations may serve as an aid to the diagnostician, since they indicate the presence of a marked lipemia, *i.e.*, a large increase in the concentration of lecithins, fatty acids and the iodine number of the fatty acids, indicating unsaturation, in lactating mothers and nursing young and also in weaned animals, in this avitaminosis. Since there has been no definite yardstick by which to measure vitamin B deficiency from the standpoint of chemical analysis of the blood, as, for instance, the low phosphorus concentration in the case of rickets, it has been difficult to diagnose, positively, borderline cases of vitamin B deficiency as it exists in the United States; and it is hoped that a chemical study of the lipids of the blood will prove helpful to the clinician as a guide in vitamin B therapy, particularly in infant nutrition, in which anorexia is a common symptom complex—*Journal A. M. A.*

COUNTY SOCIETIES

BRANCH COUNTY

The annual meeting of the Branch County Medical Society was held January 21, 1932. The following officers were elected: President, Dr. Kenneth L. Olmsted, Coldwater; vice president, Dr. H. A. Scovill, Union City; secretary-treasurer, Dr. C. E. Merritt, Quincy; delegate to state convention, Dr. A. G. Holbrook, Coldwater; alternate, Dr. R. L. Wade, Coldwater; Medico-Legal Committee, Dr. S.

EATON COUNTY

The following are the newly elected officers of the Eaton County Medical Society: President, Dr. C. A. Stimson, Eaton Rapids; vice president, Dr. Austin Burdick, Grand Ledge; secretary-treasurer, Dr. B. Van Ark, Eaton Rapids; delegate to State Convention, Dr. A. G. Sheets, Eaton Rapids; alternate, Dr. K. Anderson, Charlotte.

B. VAN ARK, *Secretary.*

GOGEBIC COUNTY

The following officers were elected for 1932 in the Gogebic County Medical Society:

President, Dr. T. R. Rees, Ironwood; vice president, Dr. H. A. Pinkerton, Ironwood; secretary-treasurer, Dr. C. E. Anderson, Bessemer; State delegate, Dr. W. E. Tew, Bessemer; alternate State delegate, Dr. A. J. O'Brien, Ironwood; Defense League representative, Dr. D. C. Pierpont, Ironwood.

The following were elected as members of the Board of Directors: Dr. T. J. Hombley, Ramsay; Dr. W. E. Tew, Bessemer; Dr. E. H. Madajesky, Ironwood; Dr. C. C. Urquhart, Ironwood; Dr. M. M. Hanson, Marenisco.

C. E. ANDERSON, *Secretary.*

GRATIOT-ISABELLA-CLARE COUNTY

The January meeting of the Gratiot-Isabella-Clare County Medical Society was held in the Wright Hotel, Alma, Thursday evening, January 21.

Twenty had dinner together and two members came in after dinner.

President Burt called the meeting to order. Dr. Highfield presented a case of Addison's disease.

The minutes of the December meeting were read and approved. A letter from the State Commissioner of Health, C. C. Slemons, thanking the Gratiot County doctors for their assistance in giving toxin-antitoxin to the school children was read. Other communications were also read, one notifying us that the State Society dues were reduced to \$7.50; at this point motion was made and carried that we reduce the County Society dues to \$2.50 for 1932. Motion was made and carried that Dr. T. J. Carney act as delegate and Dr. W. L. Harrigan act as alternate to the State Society meeting.

President Burt announced the following committee appointments for 1932: Medico-legal Committee—Dr. B. C. Hall and Dr. W. L. Harrigan; Legislative Committee—Dr. C. D. Pullen and Dr. C. F. DuBois.

President Burt then introduced Dr. A. O. Hart from St. Johns, who talked on "The Acute Abdomen." The doctor passed around a typewritten outline, dividing the abdomen into right upper quadrant, left upper quadrant, right lower quadrant, left lower quadrant. He discussed clinical signs and symptoms and etiology in general, then each quadrant

in detail. Dr. Hart's talk was discussed by Doctors T. J. Carney and L. F. Hyslops. Cases were also described by Doctors Lamb and Budge and Luton, after which President Burt thanked Doctor Hart for his instructive talk.

Meeting adjourned.

E. M. HIGHFIELD, *Secretary*.

HILLSDALE COUNTY

Hillsdale County Medical Society convened at the Orange Lantern Tea Room on Tuesday, January 19, 1932, at 6:30 P. M., for the annual meeting.

After the dinner, the vice president, Dr. C. L. Hodge, called the meeting to order.

Minutes of last meeting were read and approved.

The society then proceeded to the election of officers for the current year, resulting as follows:

President, C. L. Hodge, Reading; vice president, H. F. Mattson, Hillsdale; secretary-treasurer, D. W. Fenton, Reading; delegate to State Medical Society, B. F. Green, Hillsdale; alternate, A. E. Martindale, Hillsdale.

Dr. Mattson then read a valuable paper on "Post-operative Pulmonary Embolism." Discussion by Dr. Green, Dr. Miller and others.

Dr. Green next gave a most interesting report of a case of injury from a fall on an upstanding pitch fork handle resulting in rupture of the bowel. Treatment was laparotomy with free drainage; with restoration to health. Discussion by Drs. McFarland, Miller, Poppen, Mattson and others. This case shows the value of prompt surgical interference in these desperate injuries of the bowel, followed by absolute rest and careful postoperative attention.

A discussion of the question of the fee bill showed that there seems to be no well recognized fee bill in use by the society at the present time. After some review of the matter, it was moved, supported and carried that the old fee bill of ten or twelve years ago be brought to the next meeting by the Secretary for discussion and amendment if needed.

Bill of the Secretary of \$9.75 for incidentals was approved.

It was moved, supported and carried "that in view of the rebate of \$2.50 in dues by the State Society, the dues for the county society be reduced until further notice to \$1.00 per year, as prior to 1928."

The society then adjourned.

D. W. FENTON, *Secretary*.

JACKSON COUNTY

The first meeting of the Jackson County Medical Society for the New Year was held Tuesday evening, January 19, 1932, in the Rose Room of the Elks Temple, with Dr. C. E. DeMay presiding.

Dr. Frank Van Schoick, chairman of the Health Education Committee, gave a report on the plans of this committee for the coming year. These will include:

1. Securing speaking engagements for local physicians on health topics.
2. Securing a regular time for broadcasting health topics over the local broadcasting station, WIBM.
3. Replacing the present local newspaper syndicate by special articles prepared by the Michigan State Medical Society.
4. Arranging a special program for Health Education Week.
5. Arranging a program on food facts for women.
6. Coöperating with the State Board of Health on Child Hygiene.
7. Securing the aid of the local Women's Auxiliary.

8. Continuing the campaign for periodic health examinations.

9. Preparing special pamphlets for distribution.

The meeting was then turned over to Dr. Phillip Riley, chairman of the program committee, who introduced Dr. Louis Hirschman of Detroit. Dr. Hirschman gave an interesting illustrated lecture on the subject, "Whither Are We Drifting with Colitis."

Attendance numbered sixty-six.

KENT COUNTY AT HOME

On the evening of February 10 the members of the Kent County Medical Society realized a desire that has existed for twenty years—they occupied their own Society home for the first time.

The occupying of permanent headquarters, club room, library, reading room and cafe has been a subject of discussion and investigation at times during the past twenty years. Some reason or other prevented realization. Two years ago a new committee was appointed. Plans were developed that culminated in an agreement with the owner of the new Medical Arts Building and the lease of necessary space was executed. Architects presented floor plans which were eventually accepted and in due time contractors completed their work. The committee then set about to secure the necessary furnishings and with the coöperation of decorators and furniture manufacturers the new club headquarters were furnished. It is said that the furnishings are the finest in the country.

Its labors completed, the committee and officers prepared for the homecoming which was held on the evening of February 10, at six P. M. One hundred fifty-two members sat down to the prepared repast. Following the dinner the committee made its final report through its chairman, Dr. J. C. Foshee. He turned over to the Society in behalf of his committee the Society's new home. It consists of: Library stack and reading room, club auditorium, card room and cafe. The furnishings are beyond description—they must be seen to be appreciated.

Following the acceptance of the report, the Society presented Dr. Foshee with a cane, expressive of the appreciation of all the members. Following two short addresses by members, the chairman of the Board announced that \$4,000.00 was needed to liquidate all indebtedness. A blackboard, blocked in squares representing sums from \$5 to \$100 and totaling \$4,000, was brought in. The Chairman asked the members to assume to pay the amount in the square they voluntarily selected. Never have we encountered the spirit and enthusiasm that followed. Within thirty minutes every square was taken and with additional subscriptions a sum of over \$5,000 was raised, enabling the officers to pay all bills and have a working reserve.

Kent County thus entered its new home without incumbrance. The society welcomes visiting physicians to make this their headquarters when in Grand Rapids.

LAPEER COUNTY

The Lapeer County Medical Society held their regular meeting on January 14 as guests of the Lapeer City Hospital, with a good attendance.

Dr. D. B. Zimmer, of Lapeer, presented an interesting paper on "Infantile Paralysis," reporting cases observed in the recent epidemic.

The newly elected officers are as follows: President, H. M. Best, Lapeer; vice president, D. J. O'Brien, Lapeer; secretary-treasurer, J. R. McBride, North Branch.

J. R. McBRIDE, *Secretary*.

LUCE COUNTY

The January meeting of the Luce County Medical Society was held at the home of Dr. R. E. Spinks, with Drs. Spinks and Bohn as hosts. The ladies were present, and an excellent dinner was served.

Following the meal the ladies played bridge. The meeting was called to order by President Redwine. Minutes of past meeting were read and approved.

A paper on "Insanity" was presented by Dr. M. J. Morrissey, followed by a general discussion.

The following officers were elected for the ensuing year: President, Dr. R. E. L. Gibson; vice president, Dr. C. B. Toms; secretary-treasurer, Dr. Geo. F. Swanson; delegate, Dr. H. E. Perry; alternate, Dr. E. H. Campbell.

GEO. F. SWANSON, *Secretary.*

WAYNE COUNTY

HOUSEWARMING FOR WAYNE COUNTY SOCIETY

The Wayne County Medical Society, Detroit, composed of approximately sixteen hundred members, held its Housewarming in the new headquarters of the Society, 4421 Woodward at Canfield, Detroit, on Friday, January 29. The affair was staged by

the Welfare Committee of the organization and attracted over twelve hundred physicians, their wives and friends. The proceeds of the evening's entertainment will be used for charity.

The new building of the Wayne County Medical Society, the former David Whitney home, contains fifty rooms, some of which are as large as modern auditoriums. The house is famous in Detroit for its beautifully carved woodwork and parquet floors, as well as for its twenty fireplaces, each of different marble or tinted brick, and for its stained glass windows.

In this chateau-like edifice, the Wayne County Medical Society will be able to do a bigger job for its members and increase the scope of its activities to include many civic responsibilities imperative for its continued progress.

The first floor of the new building will be given over to the committee rooms, lounges and dining rooms of the Society. The second floor will contain the Executive Offices, together with the offices of the Detroit Physicians Business Bureau, the collection department of the Society. The Smokers' Room, billiard and ping-pong room will occupy panelled space in the basement. A new feature of the Society headquarters will be the Seniors' Room, to be set aside for doctors who have been in practice over twenty-five years. The Noon-Day Study Club, composed of physicians under the age of forty, will also occupy space in the new Wayne County Medical Society building.



NEW HEADQUARTERS BUILDING, WAYNE COUNTY MEDICAL SOCIETY

MACOMB COUNTY

At a regular meeting of the Macomb County Medical Society, held on Monday, February 1, at the Medea Hotel, Mt. Clemens, at which twenty members were present, Dr. Morrell M. Jones, of Pontiac, Michigan, gave an extremely interesting and instructive talk on "The Management of Persistent Occipito-Posterior Position."

His talk was supplemented with two reels of fine motion pictures. Doctor Jones' talk stimulated a great deal of discussion on the subject.

The Membership Committee reported favorably on the application of Dr. C. White, of Fraser, Michigan, who was duly elected.

There was also a new application submitted by Dr. M. M. Wilde, of Warren, Michigan.

J. N. SCHER, *Secretary*.

MIDLAND COUNTY

On call of the President, W. D. Towsley, the members of the Midland County Medical Society met at the Country Club House and all nine members had dinner together on January 12, 1932.

At 1:00 p. m. the meeting was called to order. Minutes of previous meeting were read and approved.

Motion by Dr. Sherk that Dr. C. V. High, Sr., be elected president of the society for the year 1932. Carried.

Motion by Dr. High, Jr., that Dr. Dougher continue as secretary for the year 1932. Motion carried.

On talks for the good of the society it was understood that we try to meet once a month.

Adjourned to meet on call of the president.

E. J. DOUGHER, *Secretary*.

MONROE COUNTY

Monroe County Medical Society has had some interesting meetings this year.

On November 19, 1931, Dr. George Belote of the University Hospital, Ann Arbor, gave a talk on the "Treatment of Syphilis." The talk was given from a practical point of view and was greatly appreciated by everyone present.

On December 17, Dr. Howard Waggoner, of the Department of Neurology, Ann Arbor, spoke on "The Places of Neurology in General Practice." This was a valuable address.

On January 21, 1932, Dr. J. Milton Robb, Detroit, president-elect of the Michigan State Medical Society, and Mr. William J. Burns, executive secretary of the Wayne County Medical Society, were the speakers of the evening. The city editor of the *Monroe Evening News*, Mr. F. W. LaRouche and his wife and the doctors' wives were also guests at the meeting, and the dinner served at the Park Hotel. Dr. Robb spoke on "Medical Economics." Mr. Burns discussed the panel system in England. Both speeches were pertinent to our present situation and were greatly appreciated.

FLORENCE AMES, M.D., *Secretary*.

NORTHERN MICHIGAN

The February meeting of the Northern Michigan Medical Society was held at the Perry Hotel, Petoskey, February 11, 1932, with an attendance of twenty-one members and guests. We were honored by the attendance of four new doctors, who immediately made application for admittance to our society.

After partaking of an excellent dinner the meeting was called to order by the President, Dr. William Stringham.

Minutes of the previous meeting were read and

approved. Some correspondence was read by the Secretary.

Reports of committees were heard. Dr. Sher of Mackinaw City was voted a membership in the Society.

Program Committee appointed as follows: Drs. Mast and Van Leuven of Petoskey and Dr. Brenner of East Jordan.

Motion was made and carried that the President appoint a Committee of Public Relations, such committee to consist of two members from each county, and their findings to be subject to the approval of the Society as a whole.

The business for the evening was then suspended and the program turned over to our guest, the State secretary, Dr. F. C. Warnshuis. Dr. Warnshuis gave a very interesting talk on "Head Injuries." This was followed by another timely talk on State Society Activities. A general discussion then took place.

This meeting was very interesting and every member present felt he had been amply repaid for attending. Dr. Warnshuis was given a rising vote of thanks for coming to talk to us. Meeting adjourned.

E. J. BRENNER, *Secretary*.

OCEANA COUNTY

The Oceana County Medical Society held a meeting December 30, 1931, at which time the following officers were elected for the year 1932: President, Dr. L. P. Munger, Hart; vice president, Dr. A. R. Hayton, Shelby; secretary-treasurer, Dr. Clinton Day, Hart; delegate to State Meeting, Dr. A. R. Hayton, Shelby; alternate, Dr. J. H. Nicholson, Hart.

Applications for membership of Dr. N. W. Heysett of Hart, and Dr. William Heard of Pentwater, were referred to committee to report at next meeting.

CLINTON DAY, *Secretary*.

O. M. C. O. R. O. COUNTY

The regular meeting of the O. M. C. O. R. O. County Society was held November 11, 1931, Dr. L. A. Harris, presiding. Minutes of the last meeting were read and approved.

The report by Dr. Keyport, delegate to the meeting of the State Society at Pontiac, 1931, was read and accepted. Discussion followed.

Members present: Dr. L. A. Harris, Dr. C. R. Keyport, Dr. C. G. Clippert, Dr. McKellop, Dr. Lee, Dr. Ford, Dr. McDowell, Dr. Curnalia.

Report of the Secretary and Treasurer was read and approved.

A communication of Dr. Warnshuis relative to examination of unemployed, was brought before this society. Dr. Curnalia, secretary, was instructed to write Dr. Warnshuis and to extend all possible aid in the jurisdiction of this society to its full co-operation. Motion by Dr. Keyport and supported by Dr. Clippert that this motion be accepted.

Election of officers: Moved by Dr. Clippert and supported by Dr. Harris that Dr. G. S. McDowell be elected president of this society for the ensuing year, 1932. Motion carried. Moved by Dr. Harris and supported by Dr. Keyport that Dr. Ruey O. Ford be elected vice president of this society for the ensuing year, 1932. Motion carried. Moved by Dr. Harris and supported by Dr. Clippert that Dr. Curnalia be elected secretary and treasurer of this society for the ensuing year, 1932. Motion carried. Moved by Dr. Ford and supported by Dr. Harris that Dr. Keyport be elected as delegate to the State Society for the ensuing year, 1932. Motion carried. Moved by Dr. Harris and supported by Dr. Ford that Dr. Clippert be elected as alternate delegate

to the State Society for the ensuing year, 1932. Motion carried.

A motion was made by Dr. Kcyport, seconded by Dr. Harris, that the next meeting of this society be held in West Branch at some date in May, 1932, with the amendment that the president and secretary arrange for a speaker to address a public meeting after the business meeting of this society. Motion carried.

Adjournment.

CLIFFORD C. CURNALIA, *Secretary.*

WOMAN'S AUXILIARY, MICHIGAN STATE MEDICAL SOCIETY

MRS. J. EARL McINTYRE, *President, Lansing*
MRS. W. E. McNAMARA, *Secretary, Lansing*

THE DOCTOR'S WIFE

MRS. GUY L. KIEFER

DETROIT, MICHIGAN

I am glad that I can take refuge in a general subject like "The Doctor's Wife" and do not have to talk on the subject, "How to Be a Successful Wife to a Doctor."

It is so much easier to discuss problems in general than to discuss the technic of solving them.

It may have occurred to you, as it did to me, to ask whether the task of being a doctor's wife is much different from that of being the wife of any professional man, conceding that love is there in both cases. The answer is unhesitatingly yes—not just because that has been our experience; but because statistics compiled by Dr. Dublin show that a physician's very life is shortened by the irregular hours, the liability to emergency calls, at any hour of the day or night, the exposure to all kinds of weather and the higher percentage of exposure to communicable disease. This very irregularity and strain on the doctor puts a burden on the wife of seeing that he gets the maximum rest and recreation from his home life. This sounds simple but with the complications that come with children and the increasing competition of the amusement world it is a problem that calls for talents as an executive that equal those required in the industrial world.

Quoting Ruth Steele Brooks, from an article in the North American Review "In Defense of Housewives," "The fact is, we housekeepers are, to a great extent, the victims of a wrong psychology, of a sort of inferiority complex—for we are apt, in this age, because we are the recipients of no weekly or monthly check, to esteem too greatly the work of those who are. Because our compensation is in kind rather than in cash, we tend to undervalue both it and the labor involved."

But when all is said and done, is it a narrow and unimportant concern to manage your house well, with all that that implies? Between you and me, there is at bottom a very genuine respect for our job.

The whole point of the matter is that we, too, should conceive of our work as a profession, one of the most honorable in existence, certainly the oldest. Is it not a composite of many of the professions which women pride themselves on practicing, doctor, nurse, dietitian, chemist, chef, economist, teacher, interior decorator, and, one might add, in many cases architect and landscape gardener. These are but a few of the lines along which the average housekeeper and mother of a family may be called upon to exercise her talents, any one of which is considered a thoroughly reputable calling.

But of you, as Doctors' Wives, many other duties are required—oh! so many I need not enumerate any one of them. You all know how often you are called upon to assist in the office, answering so many telephone calls and so often saying, "Doctor is not in," when he is sitting or resting beside you at the time. Then, too, acting as chauffeur, freezing in the cold, while he is making his calls. In so many, many ways the wife can be such a help. It is she who must create the atmosphere of the house. Each of us who follows the profession of homemaker should strive to create a center of good communications, a nucleus as it were, where harmony and cheerfulness can thrive, and where friends and acquaintances like to be. In other words, good house-keeping means planting a bacillus of order, harmony, comfort and friendliness in the body social.

Here is a story of two young engaged people who often dropped in for tea or dinner in a quite informal way with some mutual friends. The young man said, "If we can only team together as those two. So many common interests, such a warm and cheery welcome for friends, such good talk, always amusing, never malicious."

And so, in the face of the many things expected of housewives (and more especially of wives of physicians) the many important things to which no one else can attend and which really come within the broad scope of home duties, surely none can deny the opportunity, nay, the necessity, for all 'round development which this commonest of professions offers: the profession whose ideal is perhaps best expressed by the holding fast to "whatsoever things are lovely, whatsoever things are of good report."

The ideal home has been defined by President Hoover as, "It is the beginning of self-government. It is the throne of our highest ideals. It is the source of the spiritual energy of our people."

That statement of President Hoover is quite true, but, my friends, it is the wife who must make it so.

The National Organization has made several attempts to obtain news articles from the Michigan State Medical Auxiliary. To date, the publication committee has been unable to furnish news.

Through the Journal the committee is making an earnest effort to obtain this material. The county auxiliaries are urged to send all news items to Mrs. Chas. J. Barone, 18261 Santa Rosa Drive, Detroit, Mich., on or before the tenth of each month so they can be publicized in the Journal and a copy sent to the National Organization.

Success of the Publicity Committee depends upon the promptness and conscientious work of those in charge of publicity in each county auxiliary. Let us make this year a success by sending in something of importance each month.

MRS. CHAS. J. BARONE,
Chairman, Publication Committee.

BAY COUNTY AUXILIARY

The monthly meeting of the Women's Auxiliary to Bay County Medical Society was held on Wednesday evening, January 28, at the home of Mrs. C. W. Ash, with twenty-five members present. A delicious pot luck dinner was served from the dining table, attractive with a lace tablecloth and a centerpiece of spring flowers. Guests were seated at small tables in the living living room. Before the business meeting, which was called to order by the President, Mrs. C. A. Stewart, she introduced Mrs. Guy Petterson, who sang several vocal selections, accompanied by

Mrs. Gerald Walsh. Reports of the secretary and treasurer were then read, also by-laws, by Mrs. T. G. Nilson. An article from the January issue of *The Journal of American Medical Association* on *The Medical Organization of the Auxiliary*, by Mrs. J. Earl McIntyre, was read by Mrs. F. S. Baird. While listening to these reports, the ladies sewed for the babies in Mercy Hospital. No new business being in order, we adjourned to meet in February, time and place to be announced later.

LOUISE M. SWANTEK.

WAYNE COUNTY AUXILIARY

The regular monthly meeting of the Wayne County Auxiliary was held in the Wayne County Medical Society's new home, 4421 Woodward Avenue, February 9, 1932, at 2 P. M.

Dr. Lee Vincent of the Merrill Palmer school spoke on "The Problems of Youth." Her talk was thoroughly enjoyed by all present, and mothers of adolescent children felt much encouraged in their task, which they sometimes find very trying in this modern age. We also had the pleasure of having Miss Olga Fricker, Director of the Bonstelle School of Dancing, assisted by two of her pupils, in a short dance recital. Miss Fricker gave a short talk on "Dancing for Health," demonstrating her meaning by having one of her pupils go through the exercises taught for the foundation of dancing. The Program Committee, Mrs. A. S. Brunk, chairman, Mrs. Frank Hartman and Mrs. M. K. Mihran, are to be commended on the interesting and instructive programs they have brought us.

The Welfare Committee reported much work completed since the last meeting, and the neighborhood sewing-bees progressing nicely. In addition to the work accomplished in this way a closer acquaintanceship between the doctors' wives is brought about.

The social committee reported the plans for the annual bridge party to be held in the new home on Saturday, February 27.

Wayne County feels very grateful to the State Board for the action taken in regard to lowering state dues. Members are finding it hard to accomplish all that has been undertaken for this year—the student loan fund, the antinarcotic association work and our welfare work which we are doing for Detroit's needy school children through the Board of Education. All seem to be needed so badly that none should be discontinued.

NOISE

The effects of continuous noise on the human body and the nervous fatigue induced by excessive noise are difficult to evaluate. An engineer says that "within a generation, noise will vie with disease unless the same mechanical ingenuity that has called the mechanical robot of the age into existence shall also be able to endow it with a soul of quiet." City dwellers are saturated with noises that emanate from street traffic, railways, radios, hucksters, factories and what not. The consequence is lessened efficiency, irritability and, in some cases, neurosis. The growing menace of noise and vibration has already called forth an emphatic protest in various parts of the world. The effect of noise on the human organism is being widely investigated. To date, research has shown that sudden noise increases the rate of the heart and respiration

and the blood pressure of man and animals. A significant fact shown by experimentation is that the mental effort of the more highly developed individuals is hindered by noise, whereas less mentally developed persons seem to be helped in this way. Sudden noises cause fear reactions which become apparent in muscular tension. Muscular relaxation is difficult, if not impossible, in a noisy environment. The Noise Commission of the City of New York has made the first comprehensive measurement of the average noise level of city streets, taking more than 7,000 readings at many different places. The relative noise level was determined by instrumental measurement of the intensity of sound. The results of the survey show that there are many places in New York where a Bengal tiger could roar without being heard at a distance of twenty feet. Of the complaints of noise in New York, 53 per cent of a total of 11,068 concerned automobile traffic and rail transportation. For years this problem has been carefully studied in England, where one of the great sources of noise is machinery used in the manufacture of textiles. As long ago as 1917, a National Fatigue Elimination Day was initiated as a means of directing attention to preventable noise. In the United States, measures have been taken in several places to prevent noise. Some cities have experimented with the "noiseless" street car. Patented noise-preventing rails for street railways are in use in others. The American Electrical Railway Engineering Association has appointed a committee to study actively the problem of noise and vibration. The prevention of noise is largely an engineering problem. While at present certain legal restrictions on noise may be properly imposed, scientific research is necessary to set up definite standards for measuring the quantity and quality of noise in relation to its effect on the individual. *Jour. A. M. A.*, Jan. 16, 1932.

MACROCYTOSIS OF ERYTHROCYTES AND ACHLORHYDRIA IN PERNICIOUS ANEMIA

Russell L. Haden, Cleveland, believes that an increase in size of the average erythrocyte, best indicated in terms of volume, is the most constant and characteristic finding in the blood in the presence of pernicious anemia. An increased volume index was found in every patient in a series of 152 cases studied by him. Free hydrochloric acid is seldom, if ever, found in the gastric contents of a patient with idiopathic pernicious anemia. An achlorhydria was demonstrated in every one of the 152 patients. The mean corpuscular volume may be quite large even with a relatively high count; therefore it does not vary with the red cell count. If the deficiency which is responsible for the disease is adequately supplied, the cells return to normal size. The first indication of a relapse or a lack of a sufficient quantity of the missing principle is an increase in the volume of the red cells. Macrocytosis may occur in the presence of conditions other than pernicious anemia, but was found only 9 times in a study of 411 patients and normal individuals. Achlorhydria is a frequent finding in various clinical conditions, especially in the age period in which pernicious anemia is most common. A combination of macrocytosis of the erythrocytes and achlorhydria is seldom if ever found, except in the presence of pernicious anemia. The finding of an absence of free hydrochloric acid on gastric analysis and an increased mean corpuscular volume or plus volume index is a practically constant finding and one that is necessary for the diagnosis of active pernicious anemia; if demonstrated, it is almost pathognomonic of the disease.—*Journal A. M. A.*

THE DOCTOR'S LIBRARY

EMERGENCY SURGERY. By John William Sluss, A.M., M.D., F.A.C.S., Associate Professor of Surgery, Indiana University School of Medicine; Zone Surgeon, United States Fidelity and Guaranty Company; Consulting Surgeon, City Hospital; Staff Surgeon, Methodist and St. Vincent's Hospitals, Indianapolis, Indiana; and John Walter Martin, M.D., F.A.C.S., assisted by David Hart Sluss, M.D., F.A.C.S., and Camilius Bowen DeMotte, B.S., M.D. Fifth Edition, Revised and Enlarged with 797 illustrations, some of which are printed in colors. Philadelphia, P. Blakiston's Son & Co., Inc., 1012 Walnut St., 877 pages.

In his preface to the first edition of this work, the author outlined its scope, namely, surgery for the general practitioner written in the hope that it might serve as a guide out of uncertainty in a time of stress. The welcome accorded the book is attested by the fact that it has gone through five editions, the present being the fifth. The present edition may be taken fairly to represent surgical practice as prevailing among the leading surgeons of the present day. New chapters have been added on Post-Operative Nursing Care; Post-Operative Medical Treatment; Perforated Gastric Ulcer with Gastro-enterostomy; The Emergency Gallbladder with Cholecystectomy, and Acute Pancreatitis. The subject of fracture is dealt with completely by new chapters on Fracture Apparatus and Operative Treatment of Recent Fractures. It is of convenient size and is well indexed for ready use, making a very desirable handbook on the subject of emergency surgery.

ELECTROTHERAPY AND THE ELEMENTS OF LIGHT THERAPY. By Richard Kovacs, M.D., Clinical Professor and Director of Physical Therapy, Polyclinic Medical School and Hospital, New York. 528 pages; illustrated with 211 engravings. Lea & Febiger, Philadelphia, 1932. Price, \$6.50.

The slender library of *worth while* books on this subject is considerably enriched by this well constructed contribution. The author has had an extended experience as a physician and a physical therapist, and exercises a ripened judgment upon the many controversial and indeterminate theories which necessarily encumber a rapidly developing and extremely technical science. Fortunately, the average practitioner can satisfactorily follow the practical and seasoned instructions as to indications and applications, without undue perturbation concerning a precise hypothesis underlying each particular agency or its modification.

The author pays his scientific disrespects to the unscientific promulgation, by a certain minority, that "high frequency currents will penetrate more deeply the higher the voltage."

The student will find this book a wise, conservative, and helpful instructor. The more experienced physician and the specialist may turn to it with the assurance that nothing of real value appertaining to electro- and phototherapy has been omitted. Such a judiciously assembled collection of material will substantially aid in encouraging further advanced thought upon, and an appreciation of, this highly important subject.

J. E. G. W.

CARBARSONE IN TREATMENT OF AMEBIASIS

According to A. C. REED, H. H. ANDERSON, N. A. DAVID and C. D. LEAKE, San Francisco, the drugs

so far suggested for the therapy of amebiasis may be classified as follows: (a) alkaloids, such as those of ipecac or kurchi; (b) oxyquinoline derivatives, such as chiniofon ("yatrcn"); (c) organic arsenicals, such as acetarsone ("stovarsol", and (d) miscellaneous antiseptics and astringents, such as the alkyl resorcinols and bismuth compounds. These types of amebicidal agents have been critically evaluated on the basis both of laboratory and of clinical studies. Emetine, the most commonly used drug in amebiasis, is only partially effective in doses which too often are dangerous, especially to the heart, and there seems to be little hope of finding among the ipecac alkaloids a drug meeting the requirements for satisfactory therapy in this disease. The kurchi alkaloids have little if any useful effectiveness. Critical data are not yet available to judge properly of the value of the alkyl resorcinols, although they are interesting. It is indicated that more satisfactory amebicides are to be found among the oxyquinoline derivatives than chiniofon, the only one so far exploited, but since systematic investigation of this group has scarcely begun, conclusions cannot be drawn at the present. Certainly chiniofon has not been as successful as was hoped it would be. Of the organic arsenicals, only acetarsone has been much used in amebiasis, but experience shows that it is only slightly effective and then at doses too often dangerous. With rigorous but arbitrary clinical criteria of "cure," the authors treated forty unselected amebiasis patients with a high degree of success by "carbarsone," a drug, 4-carbamino-phenyl arsonic acid, containing 28.8 per cent of arsenic. The recommended dosage is 75 mg. per kilogram in divided amounts over at least a ten day period, since the arsenic in the compound seems rather slowly absorbed and eliminated after oral administration. Practically, this dosage amounts in the average adult to 0.25 Gm. twice daily for ten days, given in gelatin capsules by mouth. It should not be used in amebic hepatitis, or in amounts which might cause symptoms of arsenic toxicity. More closely than any other drug now exploited does carbarsone meet the requirements of an ideal antiamebic agent. It is clinically nontoxic in effective doses; it may conveniently be administered orally without interference with the patient's usual routine; it has no untoward side actions, and it is comparatively cheap. There is no evidence as yet that it may be of prophylactic value.—*Journal A. M. A.*

AN OPPORTUNITY TO EARN \$15,000

Mead Johnson & Company announces an award of \$15,000 to be given to the investigator or group of investigators producing the most conclusive research on the Vitamin A requirements of human beings.

Candidates for the award must be physicians or biochemists, residents of the United States or Canada who are not in the employ of any commercial house. Manuscripts must be accepted for publication before December 31, 1934, by a recognized scientific journal. Investigations shall be essentially clinical in nature, although animal experimentation may be employed secondarily.

The Committee on Award will consist of eminent authorities who are not connected with Mead Johnson & Company, the names of whom will be announced later.

There are no restrictions regarding the source of Vitamin A employed in these investigations.

For other details of the Mead Johnson Vitamin A Clinical Research Award, see special announcement, pages 14 and 15, in *Journal of the A. M. A.*, January 30, 1932.

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CONTENTS

The Relation of the Physician to the Public. E. Starr Judd, M.D.	243	The Doctor's Log. William J. Stapleton, Jr., M.D.	277
The Role of Amino Acids in the Animal Organism. I. Cystinuria and Cystine Calculi, A Surgical and Medical Problem. Howard B. Lewis, Ph.D.	249	Michigan's Department of Health. C. C. Slemons, Dr.P.H., M.D.	281
The Present Status of Prostatic Surgery. H. W. Plagge-meyer, M.D., and Carl G. Weltman, M.D.	254	Editorial:	
Primary Ileostomy in the Treatment of Generalized Peritonitis. E. C. Baumgarten, M.D., F.A.C.S.	257	Dr. Judd's Address	283
The Practice of Medicine by Corporations. F. C. Warnshuis, M.D.	259	The Beaumont Lectures	283
Septic Abortion Associated with Meningococcic Meningitis. Walter E. Larson, M.D., and Bernard H. Starmann, M.D.	267	Are We Entering the Twilight?	284
A Plea for the Preliminary Iridectomy. J. G. Huizinga, M.D.	268	Medico-Legal Defense	285
A Dislocation of the Carpal Bones—The Scaphoid and Semilunar: Report of a Case. F. T. Andrews, M.D.	269	Post-Hippocratic Medicine	285
Neurologic and Psychopathic Manifestations of Pernicious Anemia. Charles Kiely, M.D.	272	The Tuberculosis Problem	287
Myasthenia Gravis Following Electrical Shock. F. G. Lindemulder, M.D.	275	A Valuable Secret	288
		Correspondence	290
		Obituary	290
		General News and Announcements	290
		Medical Economics:	
		Can We Afford State Medicine? Part II. J. G. R. Manwaring, M.D.	291
		Society Activity	293
		County Societies	296
		Woman's Auxiliary	298
		The Doctor's Library	300

THE RELATION OF THE PHYSICIAN TO THE PUBLIC*

E. STARR JUDD, M.D.,† President of the American Medical Association
ROCHESTER, MINNESOTA

Great changes have occurred in the last several years. They are especially evident to us of the medical profession, for many modifications have been brought about through the changes in premedical and medical education. The standards of medical education were raised by the members of the profession in an endeavor to improve medical service, and that this has been accomplished is evident to all.

The principal effect of the change in medical education was promotion of science in medicine. Medicine is rapidly becoming a real science. We must all be impressed with the far-reaching effects that the progress in medical science has produced on society, and on the life that we lead today. It is also evident that with this advancement in scientific medicine there seems to be less interest in the art of medicine, and also less interest in the human side of the practice of medicine. Members of the medical profession realize this keenly, and many leaders in

the profession are putting forth every effort to preserve the art and the human side by insisting that the work of the general practitioner is the basis of our medical practice and his important position in society must be maintained. Every assistance must be extended to aid science and research in medicine, but this assistance must not be given at the expense of the family physician.

The physician in the general practice of medicine should be given facilities that will aid him in promoting the art of practice, as

*Read before the Wayne County Medical Society, Detroit, Michigan, February 16, 1932.

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well as encouragement and assistance in his methods of investigation. The idea that all research must be carried out in elaborately equipped laboratories is wrong, and many of the most fruitful investigations will be done by those in general practice, in conjunction with their general routine. The general practitioner holds a most enviable position in society, but I am afraid that he is sometimes overawed by scientific progress. He should take advantage of the developments in science and try to apply them to the care and treatment of his patients, for, after all, that is presumably what research and investigation are for; that is, to advance knowledge of disease, and improve methods of treatment. If the general practitioner does not use this knowledge it may be lost, for those making the research studies are no more qualified to apply it practically than is the physician to make the research.

THE FUNCTIONS OF THE MEDICAL PROFESSION

The functions of the medical profession are first to advise, treat and care for those who are in need of their services; second, to plan and direct programs of preventive medicine and public health, and third, to protect the public in every manner possible against the activities of charlatans and irregular practitioners.

To most of us, nothing is so personal as medicine. Each community has one or more successful practitioners, whose success depends largely on appreciation of the fact that medicine is an entirely personal affair. In these modern trends of doing things en masse and in large numbers, there is some tendency to attempt to practice medicine by numbers and in an impersonal manner. This relieves the physician of many worries and great responsibilities, but the results of such a plan cannot be as satisfactory as one in which personal relations are maintained. It seems to me that it is the duty of organized medicine to do all that is possible to maintain this personal relationship between the physician and the patient, which is the foundation of medical practice in this country.

Medical associations formerly had as their chief function the professional improvement of their members. These organizations, particularly the county societies, the state associations, and the American Medical Association, must recognize the social, eco-

nomic and political changes that have occurred as a result of the developments in scientific medicine. These improvements have come rapidly, and it takes a great deal of time properly to organize our societies to meet these changed conditions. There is evidence on every side that this is being accomplished.

SOCIAL FUNCTIONS OF THE MEDICAL PROFESSION

In the very early days, members of the medical profession were also army or navy officers or connected in some way with the government. After this, however, there came a period when the profession was much isolated from society in general. This I think was the fault of the profession itself. In modern times, however, no one realizes more than we do the necessity of close social relationship to accomplish our ends. The medical profession is also partially to blame for lack of knowledge on the part of the public of the work that it is doing. We are bound by principles of ethics which were established many hundreds of years ago. These principles were established by members of the profession itself, and it is only by maintaining these principles that we are in any way different from those in other vocations. The principles of ethics must still be maintained in order to protect society but we must take a broader view of them than some were inclined to a few years ago. We must recognize the fact that anything that is printed or spoken in public is public matter and that the press is entitled to have it. The time must never come when we will feel justified in advertising in the daily papers, magazines, or by radio, because all we shall ever have for sale will be our personal services, and positive guarantee of the results of our efforts cannot be made. It is our duty to do all that we can to let the general public know what is good and what is bad in the practice of medicine. Through the activities of our public relations and publicity committees of our component, constituent, and national association, I think that we can no longer be accused of being narrow in this matter of giving to the public all the facts regarding medicine that we have.

Each state association has its public relations committee, and in the more thickly settled communities the county society has

a public relations committee. Ross of New York has been especially active in having each county society form a committee, the duty of which is to see that the profession promotes a coöperative relationship with society. He says that the functions of such a committee of the county society are (1) to seek to establish a desirable relationship with any health organization of any kind having anything to do with the practice of preventive or curative medicine, (2) to seek to aid the medical profession to organize to give better service, and (3) to help in adjusting differences of opinion between organized medicine and other groups.

Preventive medicine has developed entirely since we have learned, as the result of scientific investigations, to know more about the cause of disease. Preventive medicine has already removed certain diseases entirely, and will do still more in years to come.

Schools have been established for the purpose of teaching the special aspects of preventive medicine and public health. Some of our medical men are devoting all of their time to this work. In the larger centers, extensive organizations have been formed to take care of this field alone. In the smaller places, the general practitioners are much better informed on these subjects than they formerly were, and are generally doing excellent work. The great danger as I see it in the present schemes for the practice of preventive medicine and public health is that there is a tendency for these groups to drift off by themselves. There is an inclination also for many business organizations to try to accomplish the same thing. We have an admirable plan in the state of Minnesota which I think might well be copied elsewhere. All organizations in our state, lay or medical, that are concerned with the practice of the healing art, are under the direct supervision of the Minnesota Public Health Association and the State Medical Association. One man, Dr. E. H. Meyerding, is secretary of both of these organizations, which means that all of the medical activities in our state are under the supervision of one head. The accomplishments of preventive medicine and public health activities are not fully realized by many of us. As our knowledge of disease advances, much more will be accomplished by these organizations.

We must never forget that public health

and preventive medicine are as much a part of the practice of medicine as anything could possibly be. Those in charge of organized medicine in this country appreciate this and are making every effort to hold these organizations together, which is certainly for the best interests of society.

ECONOMIC RELATIONS OF MEDICINE

So much has been said about the cost of being sick and the cost of medical care within the last few years that I think many are becoming very suspicious. Much that has been said certainly will not bear close analysis. That there have been great changes in the economics of the practice of medicine, there can be no question. Whether these changes are out of proportion to what has been accomplished by them, is difficult to tell. In this country of 120,000,000 of people, there are 150,000 physicians, 50,000 dentists, 200,000 trained nurses, 100,000 practical nurses, and 8,000 technicians, all working in the interest of the art and science of medicine and public health. There are between 7,000 and 8,000 hospitals in this country. About 2,000,000 of the 120,000,000 people are sick enough to be in hospitals all of the time. Nearly 2 per cent of the population are seriously sick and an additional 10 per cent are slightly sick at all times. Ninety per cent of the illness is chronic and 10 per cent acute. In order to make the people happy they must be educated as to what constitutes scientific medical practice. I have of recent years been greatly impressed in visiting the commercial exhibits, particularly of the large medical societies, at the times of their annual meetings. One cannot help but be greatly impressed with all of the modern devices and implements which are aids in the practice of medicine. And one cannot help but wonder whether all of these are necessary and whether they have not taken away from the profession that art of medicine that we hear so much about. Many of these devices are very great aids, and it is through them that medicine has progressed to its present modern state. If a doctor adds to his laboratory and office equipment, he is obliged to have more space and more help. These are the things that are responsible for the increase in the cost of care. Times have changed and we have changed with them. When we say we have changed, we do not mean that this refers to doctors alone, but to everybody. It is probable

that the economic changes in medicine are much less than in almost any other profession or industry at the present time. It is most appealing to hear about the great number of sick people who are not being adequately cared for. I have tried to receive definite information on this subject, but so far I have not been able to discover that many of the sick are going without medical attention because they cannot afford it or that adequate medical service is beyond the reach of any great proportion of our people. All through this economic depression many of the medical men have been giving their services, and as a result of keeping busy they have been much happier than some others. Charity is more extensive in the medical profession than in any other profession or business. It is my experience that few people want to be free patients; most of them want to pay and will do so if it is within their power. I believe that this question of medical economics has been greatly overemphasized until it has become propaganda promulgated largely by those outside the practice of medicine. It is to the best interest of all that the socialization of medicine should stop where it is now. Further socialization will be carried out to the detriment of those whom it is supposed to help.

The Committee on the Cost of Medical Care will make its report this fall. This committee was established to study the problem, which, according to the secretary of the American Medical Association, Dr. Olin West, is "the delivery of adequate scientific medical service to all of the people, rich and poor, at a cost which can be reasonably met by them in their respective stations in life." Those concerned in the cost of illness are the 120,000,000 persons in the United States who sooner or later become sick and the 150,000 physicians of this country. This committee has done a tremendous amount of work, and the results of its studies will be valuable. Many interesting and important problems have already been studied. For instance, the following has been brought out: At all times in the United States there are approximately 700,000 tuberculous persons. Of the children now attending school and college, about 960,000 will enter a hospital for mental disease at some period in their lives if the present rate of first admission is maintained. It has been stated that forms of neurosis alone are responsible for more human misery than tuberculosis or cancer.

There are probably 700,000 cases of malaria in the United States each year, with malaria carriers far outnumbering the cases. Joslyn indicates that he estimates that there are about 1,000,000 diabetic patients in the United States.

We are very fortunate in that the chairmanship of this committee is in the hands of Dr. Ray Lyman Wilbur. The following fundamental principles were proposed by Chairman Wilbur:

1. The personal relationship between the physician and the patient must be preserved in any effective medical service.

This committee feels that intimate knowledge of family and individual variations is essential to the best treatment. Its members also feel that the cumulative experience of the family doctor gives him a distinct advantage whether or not his formal education has been excellent. In enunciating this principle, they say that man is not a standardized machine, and that therefore the knowledge acquired by the personal contact between physician and patient is a most important factor in treatment. It is comforting to those in the actual practice of medicine to know that those directing the activities of the committee feel as they do regarding personal contacts. And we have reason to feel assured that the reports from this committee will not change this principle in any way.

2. The medical service of the community should provide for a systematic and intensive use of preventive medicine in private practice, and for more effective support of preventive measures in public health work.

Members of the medical profession appreciate this principle fully and through organized medicine most of these provisions have been made and the work is in progress now. More progress has been made recently in preventive medicine than in the curative field.

3. The medical service of the community should include the necessary scientific equipment for adequate diagnosis and treatment.

The committee calls attention to the fact that early tuberculosis cannot be detected without the aid of elaborate laboratory equipment, and we must all agree to that. We must comment, however, on the fact that this equipment is of no avail unless it is in the hands of most expert diagnosticians. More harm than good can come from the

use of the equipment unless it is so employed. The interpretation of roentgenograms of the chest in early tuberculosis is learned only after many years of hard work and study.

Reports of the findings of this committee have been sent out from time to time, and one is impressed with the tremendous extent of the work that it has undertaken, and also with some of the facts that it has set forth in its studies. The members say that an average of twenty-eight persons of every 100 who borrow from small loan companies do so because of expenditures arising from illness or death. Interest rates on these loans vary from 12 to 42 per cent per annum, which materially increases the burden of the average wage earner with a family. Of course the medical profession cannot be blamed for what seems to me to be an exceedingly high rate of interest, in these cases. Most physicians will discount the interest if patients wish to pay in installments.

In another place in the report, the medical care in a certain town is mentioned. Although there are fifty doctors who are idle much of the time in this town of 38,000 people, the reporter goes on to say that most of the people have some physical defect or condition needing correction, but that they rarely receive adequate care. Although it is likely that most people do have some physical defect, it is questionable whether the medical profession should attempt to correct all of these defects. It is difficult in the first place to say what a perfect physical specimen is, so I question very much whether all of these 38,000 people would be greatly benefited by having some kind of treatment. This report also says that these people rely largely on patent medicines, advertising quacks, or ancestor wisdom. The organized medical profession is trying every possible plan to protect the people against irregular practices. It is often said that this is a question of education, but unfortunately we find some of the most highly educated people who take absurd remedies regularly and seem to feel certain that they derive benefit from them. Quackery depends for its success on the mystery in medicine more than on anything else. We see examples of this in our daily practice. A good example of this is illustrated by the following case: Something more than two years ago a patient came to our clinic with all of the evidences of the most malignant type of cancer.

He was carefully examined at that time. In view of the fact that his general condition warranted carrying out any treatment that might offer him any relief, we undertook to see if there was anything we could accomplish. We were much interested in a treatment that had been recommended by a reputable physician in England. This treatment was carried out, and at present the patient is apparently entirely well. Several other cases of this kind have been treated with the same remedy but to no avail, and we are at a total loss to explain the result in this single case.

Other mystifying examples are frequently encountered among patients who present themselves with cancers, and on whom we have performed an exploratory operation, with removal of a small bit of tissue for microscopic diagnosis, and this examination revealed the fact that we were dealing with cancer. The growth in these instances could not be satisfactorily removed because of the extent and involvement of surrounding tissue. The incision was closed and the condition pronounced inoperable. Most patients under these circumstances live but a very short time, but there are a certain few, of whom we have record, who had no treatment of any kind except the exploratory operation, but who apparently have recovered completely. If any treatment was used, of course that treatment received the credit for curing the condition. But these cases illustrate the mystery about disease and some of the unexpected results that are obtained by treatment. It is possible that some of the results reported by irregular practitioners in the cure of cancer have likewise been of this kind; it is more likely, however, that the results they obtain or report are in cases in which there never has been a cancer.

The Committee on the Cost of Medical Care calls attention to the fact that hospitals in the United States now represent an investment of \$3,000,000,000. It also says that there is no systematic training available for hospital administrators. When we realize this tremendous investment in hospitals, we must appreciate the necessity of proper administration. I think, as a general rule, that hospitals are generally very well and economically administered, although it is possible that economies could be brought about in some places by trained administrators.

The final report and the recommendations of the Committee on the Cost of Medical

Care are awaited with much interest by all of us. Everyone realizes that costs have increased, but there is probably no expense so adaptable as that of medical service. And, it is likely that the final analysis will show that the costs of medical service are in the hands of the people. I am sure that this analysis will also show that the greater proportion of the sick are receiving good care. It is probable that the least important economic need is reduction in the charge for medical services. Organized medicine is ready to cooperate in every way that will assure the best medical service to all of the people at all times.

POLITICAL RELATIONS OF MEDICINE

Medical organizations have not, until recently, been as active in legislative activities as they should have been. I hope the time will never come when medicine dips too deeply into politics. We must never attempt to control any activities except those pertaining to scientific medicine and its relation to society. On the other hand, I think that we should be more active than in the past, and that we must see that our state and national legislators are acquainted with medical activities, so that they may know how to act. These men are anxious to be kept informed, and some of them state that in the past the only information they could obtain was from the irregular practitioners of the healing art, who were always on hand when any medical legislative matter was to be considered. Medical organizations fully realize now the committee which deals with legislative matters is an important one. I think that in many instances it is important for the local county society to have a political or legislative committee. Such a committee may be of assistance to the local government and may help to solve problems connected

with public health and other activities. Such a committee will also be able to take its problems to the state legislative body whenever it is advisable to do so. Nearly every state association has its legislative committee, and these groups are busy. Their endeavors are giving excellent results. In many states, better laws are being enacted, regulating the requirements for the practice of medicine. Better laws have been made for the protection of health, and to facilitate the treatment of disease. Each year irregulars attempt to introduce new bills and these problems must be met in order to protect the people. Each year the question of vivisection is a subject for lively discussion in some part of the country; this makes it absolutely imperative to have an active organization in each state if we are to keep legislators informed so that they can pass laws that will protect society, and defeat others that would be a detriment.

It is of the greatest importance that those in the national legislature should know about medical matters, and the American Medical Association has a legislative committee, and sometimes special committees, which devote a great deal of time to this work.

The public looks to us not only for relief from pain, but for protection against disease, against quacks, against the innocent use of harmful drugs and other products. We are earnestly endeavoring to help secure and carry out proper legislation to control the situations that arise. Often it is necessary to direct and even assist in social and economic adjustments in order to raise the standard of living and the health of a family or a community. Our manifold duties are constantly increasing because we are always eager to encourage any relationship or contact that will render the public a better service.

THE RÔLE OF AMINO ACIDS IN THE ANIMAL ORGANISM

1. CYSTINURIA AND CYSTINE CALCULI, A SURGICAL AND MEDICAL PROBLEM

BEAUMONT FOUNDATION LECTURE I

HOWARD B. LEWIS, PH.D.†
ANN ARBOR, MICHIGAN

During the same period in which Beaumont, whose work has been fittingly memorialized in the establishment of these Beaumont lectures by the largest medical group of the state in which his investigations were carried out, was making his epoch-making pioneer studies on the physiology of digestion, the initial studies of protein structure were begun. Thus in 1820, a few years prior to Beaumont's work, we have the first observation that "albuminous matter" (gelatin, casein, etc.) on treatment with boiling acids was decomposed into relatively simple substances, crystalline in nature. These observations of Braconnot antedated by some nineteen years the formal designation of the chief structural element of the cell as "protein" by the Dutch chemist, Mulder, in 1839. The importance he attached to these substances is clearly revealed in the derivation of the word chosen, protein from the Greek "πρωτεϊσς," "first in importance." Later developments of our knowledge of the structure and functions of the proteins have demonstrated that Mulder did not err in his choice of a term, the proteins are truly of first importance in health and disease.

The most striking development of further studies of the proteins has been the recognition that they are exceedingly complex colloidal substances, which may be readily resolved into a number of simpler crystalline substances, such as those referred to above, which collectively are designated as the *amino acids*. Today the emphasis has shifted so that, for the most part, we are concerned with the origin, function and behavior of the individual amino acids rather than with the proteins as such.

It is to the first of these amino acids to be so isolated as a product of the metabolism of the living organism, cystine, that I invite your attention today. In the subsequent lecture, problems concerned with other amino acids will be discussed.

On July 5, 1810, William Hyde Wollaston, an English physician, whose contributions to science were as brilliant and varied as his personality was eccentric, presented before the Royal Society in London a paper entitled, "On Cystic Oxide, a New Species of Urinary Calculus." Wollaston, who had previously contributed much to the study and classification of urinary concretions, in this communication stated, "It is now about

five years since I first met with another species (of calculus), evidently different from each of those before described" and later, "This species is probably very rare; for although I have omitted no opportunity of paying attention to any urinary concretions to which I could have access, I have, to this time, seen only one other specimen of the same substance." After a careful description of the properties of the substance characteristic of this peculiar calculus, Wollaston wrote, "From the ready disposition of this substance to unite with both acids and bases, it would appear to be an oxide" and "I am therefore inclined to consider it as an oxide, and since both the calculi that have yet been observed have been taken from the bladder, it may be convenient to give it the name of cystic oxide, which will serve to distinguish it from other calculi." Thus were discovered together, the metabolic error, cystinuria, and the first of the amino acids concerned in metabolism, *cystic oxide*, or as we now term it, *cystine*.

In 1832, Berzelius, the distinguished Swedish chemist, pointed out the inconsistency of the term cystic oxide and suggested in its place, the name cystine. In the early analytical work, the presence of sulfur in cystine escaped detection until 1837, when Baudrimont and Malaguti, Thaulow, and others presented evidence of its occurrence in the molecule. Subsequent developments came slowly and up to 1899 cystine was known as a substance which was excreted in the urine in the peculiar and relatively rare condition known as cystinuria, which, due to its insolubility, gave rise to calculi similar to the calculus originally described by Wollaston, and which presumably had its origin in some process of metabolism.

In 1899, Mörner reported before the

†For professional note see page 58, January, 1932, number of the Journal of the Michigan State Medical Society.

Swedish Academy that cystine had been isolated by him from the products of hydrolysis of horn, and, two years later, Embden was able to identify cystine as a product of hydrolysis, not only of horn, but also of other common proteins, as serum albumin and ovalbumin. The general occurrence of cystine as a constituent of the protein molecule was thus established, an occurrence which subsequent investigation has fully confirmed. In fact, cystine is to be considered the chief sulfur-containing component of the protein molecule. The chief constituent of Wollaston's "new" urinary calculus is thus identified as an important unit of the protein molecule.

Under normal conditions the cystine which originates from the catabolism of protein either endogenous or exogenous is oxidized completely and the sulfur present in the molecule, oxidized to sulfuric acid, appears in the urine as sulfates, chiefly inorganic sulfates of such elements as sodium or potassium. A small part only of the total sulfur excreted by the kidneys is in the form of unoxidized or organic sulfur. There exists in normal urine a trace only of the amino acid, cystine. In cystinuria, on the other hand, there is a deviation from the normal course of metabolism of the cystine of the protein molecule. A part of this cystine escapes the normal oxidative processes and is excreted in the urine. The amount of cystine thus eliminated by the kidneys may be as great as two grams per day. Inasmuch as cystine is not readily soluble, particularly at the hydrogen ion concentration of the urine, it frequently is precipitated, thereby giving rise to calculi in the kidneys or urinary bladder. From the clinical viewpoint, cystinuria is then primarily a surgical problem, since it is to the surgical clinic that cystinuric patients most frequently present themselves for relief from the difficulties associated with the formation of calculi. It has been the study of these calculi which has, in the past, most commonly led to the diagnosis of cystinuria.

These calculi vary in size from very small stones which may be voided with the urine to stones weighing twenty grams or more. The striking case report of Tennant of Denver (1924) may be briefly discussed as an example of marked calculus formation. Fourteen cystine calculi aggregating 73 grams in weight were removed from the two kidneys and right ureter in three successive

operations. One of these stones, removed from the cortex of the right kidney, weighed 50 grams. This stone and a bladder stone of approximately the same weight removed at operation in a Swedish clinic are among the largest cystine calculi recorded. Through the courtesy of Dr. Tennant and his group, it was possible for the writer to analyze a typical calculus from this case. The calculus examined was found to contain over 95 per cent of cystine.

The problem of the visibility of cystine calculi in the radiographic picture is an important one from the practical standpoint of diagnosis. There exists some question as to whether cystine calculi are invariably to be detected roentgenologically. General opinion and clinical experience classify them as shadow-casting stones, but the characterization of the shadow varies from "very dense" to "very faint." Graves of Boston has recently discussed a case in which a cystine calculus was removed, which had failed to reveal itself in two X-ray examinations. In a further study of this problem, he examined X-ray pictures of the gastro-intestinal tract after oral administration of two capsules, the one containing bismuth subnitrate and the other cystine. While the capsule containing the bismuth salt could be readily seen throughout the tract, that containing cystine was never visible. This would indicate that a calculus of pure cystine, if such exists, should not be readily detected roentgenologically. However, cystine calculi are seldom "pure" but are usually contaminated with a certain amount of inorganic matter, salts of calcium and phosphorus, and appear to cast some shadow as a rule. Graves has well summarized the present status of the problem of the visibility of cystine calculi under the X-ray. "It is probably fair to say in general, however, that the pure cystine calculi with their characteristic loosely-knit structure, should be classified among the relatively invisible stones. Unusually compact structures, large size or admixture with inorganic substances, may account for exceptions to this rule and may explain some of the results of other observers."

Early in the study of cystinuria, it was recognized that the condition commonly occurred in several members of a family group. A very remarkable example of this familial relationship has been studied from the clinical standpoint by Thin of Edin-

burgh and from the chemical side by his coworker, Robson. As shown in the chart, in the first generation in which cystinuria was noted, six of twelve children were affected, while of five children born to the cystinuric daughter, four were definitely cystinuric. In the chart (Fig. 1) the position of the subject of the initial study is indicated by the encircled figure, while crosses show the existence of members concerning whom information is lacking.

Cystinuria is usually considered to occur more commonly in males than in females. Garrod, in a summary in 1922, noted 103 males in a total of 150 recorded cases or 68.66 per cent males. In the last ten years, of 71 cystinuric individuals for whom the sex is recorded, the sex ratio is 42 males to 29 females, a distribution similar to that observed by Garrod. It seems possible that this tendency to a greater frequency of cystinuria in males than in females may be apparent only. It is probable that in the female, due to the larger size of the urethral opening, bladder concretions may be passed with the urine more readily than in the male and that the female cystinuric is not so frequently led to seek surgical aid as a result of cystine calculi and the condition thus more often escapes detection.

Age is not a factor in cystinuria. The first cystine calculus was removed from the bladder of a child of five, while several instances are known of cystinuria in children under two years of age. Sir Henry Thompson crushed a cystine calculus for a patient 81 years of age, who had passed a similar stone 39 years previously. Meyer has recently reported cystinuria in a woman 87 years of age, who had never experienced difficulties due to calculus formation.

It seems probable that cystinuria uncomplicated by calculi may be of more frequent occurrence than is usually believed. It has been stated that only "2.5 per cent of cystinurics develop stones, but the figure is probably high, on account of the large number of unrecognized cases of cystinuria." Since cystinuria uncomplicated by calculi has in the past been detected almost entirely by examination of the urine of relatives of patients who have been compelled to seek surgical aid for the removal of calculi, it is difficult for the writer to understand on what basis such an estimate was arrived at. The finding of cystine crystals in routine urine examinations has not been frequent.

Sondern in 1911 stated that in the examination of approximately 35,000 specimens of urine, true cystinuria was encountered in only four cases and a similar frequency has been reported by others.

Heretofore the identification of cystine in the urine, except in those acute cases in which the characteristic hexagonal crystals of cystine separate and appear in the urinary sediment, has not been easy. However, as will be discussed later, the conditions which determine the precipitation of cystine and the appearance of the typical crystals of cystine in the urine are such that a considerable excretion of cystine may occur without precipitation. A simple clinical test for

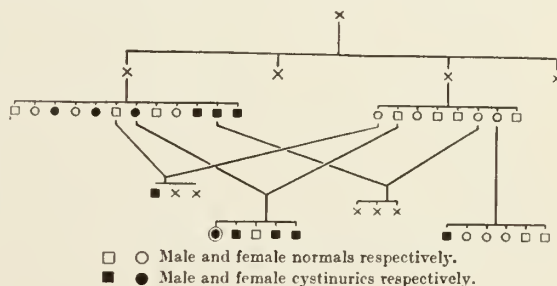


Fig. 1.

cystine, which could be applied routinely, would be of considerable value in detecting cystinuria, and in cases of renal colic such a test, if positive, should possess considerable diagnostic value. Such a test has not been available until recently. It is possible to apply to urine the well-known nitroprusside test for cystine as suggested by Brand. This test is simple to perform and while not absolutely specific for cystine affords valuable presumptive evidence of its presence. The writer has used this test in the examination of about 12,000 urines for cystine in the past three years and has found the test to be delicate and satisfactory. The test depends upon the reduction of cystine to cysteine by sodium cyanide and the reaction of cysteine with sodium nitroprusside to give a deep magenta color. We have in our laboratory followed the procedure suggested by Brand. Two c.c. of a 5 per cent solution of sodium cyanide are added to 3 c.c. of urine and the reaction is allowed to proceed for 5 to 10 minutes. Five to 8 drops of a *freshly prepared* 5 per cent solution of sodium nitroprusside are added and the contents of the tube are mixed. In normal urines a faint brownish color is developed, while with cystinuric urines a rather stable magenta

color, characteristic of the sulfhydryl group (SH) present in cysteine, appears.

We have examined by the use of this test urines of about 11,000 healthy young men and women in the past three years. These urines were collected for the most part in connection with the medical examinations given to entering students at the University of Michigan and the Michigan State Normal College. In this series, we have observed 4 individuals (3 men and 1 woman) in whose urines cystine crystals have been regularly present. These urines presented the typical picture of cystinuria, gave strongly positive nitroprusside tests and the percentage of organic sulfur was distinctly higher than the normal value. In addition, 14 individuals have been examined repeatedly in whose urines strongly positive tests for cystine by the nitroprusside test have been obtained, although crystals of cystine have never been identified in the urine. We consider this group as characteristically cystinuric as the first and smaller group. In none of these 18 individuals have we been able to obtain any history of the occurrence of calculi. We are gathering more information concerning the frequency of cystinuria in "healthy" individuals and believe that such data may prove of value in the ultimate solution of the problem of cystinuria. The collection of these data would have been impossible without the cordial coöperation of the officials of the Health Service of the University, Dr. W. G. Forsythe and Dr. Margaret Bell, and of Dr. Glenadine Snow of the Michigan State Normal College.

It has usually been considered that, except for the complications introduced by calculus formation, cystinuria is a harmless anomaly. The numerous reports of patients who have lived many years despite repeated formation of calculi would seem to warrant such a conclusion. Evidence is not lacking, however, which suggests that in young children, at least, disturbances of cystine metabolism are not harmless. Lignac in 1924 and 1925 reported three cases, young children all under two years of age, who presented the picture of marked malnutrition, a "progressive atrophy," which terminated fatally. At autopsy, it was possible to demonstrate cystine crystals in many tissues (spleen, liver, mesenteric lymph glands) both by histological and chemical methods. Similar observations were made by Abderhalden and

Kaufmann in 1903. In view of the fact that cystine is believed to be an essential amino acid, in the absence of which normal growth and nutrition are impossible in the white rat at least, these autopsy findings suggest that the lack of normal utilization of cystine may have been an important factor in the failure of normal nutrition and death of these children. It is possible that in older patients, the requirements for cystine are not as great as in the growing individual and that cystinuria in adults does not result in as serious a disturbance of the metabolic processes. The frequent references to "gouty attacks" and rheumatism in the clinical histories of cystinuria suggest that cystine may be commonly deposited in the tissues of cystinurics, deposits similar to those just described.

What is the defect in metabolism which causes the characteristic failure of normal oxidation of cystine in cystinuria? What factors influence the excretion of cystine? Space does not permit a detailed discussion of these problems, nor is the solution of either problem definitely known. Some of the essential facts may be briefly stated.

(1) The cystine excreted is to a considerable extent endogenous as evidenced by the continued excretion of cystine in fasting or on a protein-free diet. (2) Cystine fed to a cystinuric patient is as readily oxidized to sulfates as when fed to a normal individual. In the remarkable case of Thiele, cystine isolated from the patient's own urine and fed to the patient was completely oxidized. (3) The absolute amount of cystine excreted appears to depend to some extent at least upon the level of protein metabolism and hence under normal conditions, on the protein content of the diet. Cystine excretion is markedly increased by the ingestion of a diet high in protein content. (4) Not all the sulfur compounds liberated in the processes of endogenous metabolism escape oxidation since a considerable amount of sulfates appears in the urine even under conditions of fasting. (5) In many instances, a disturbance in the catabolism of amino acids other than cystine is associated with cystinuria, since the diamines, putrescine and cadaverine, formed by deamination of arginine and lysine, frequently appear in the urine. This, however, does not appear to be a constant feature of the urinary picture in cystinuria. (6) An aggravation of the cystinuria by infection outside of the

genito-urinary tract has been observed frequently, particularly in the more recent investigations. Thus the patient of Magnus-Levy, admitted to the clinic with a diagnosis of rheumatism, during a period of high fever, excreted about 1.7 grams of cystine; later when the acute infection had disappeared and the temperature was normal, the cystine excretion dropped to about 0.5 gram despite a high level of protein metabolism. The significance of these and similar observations by others is not clear; it seems improbable that they can be satisfactorily explained entirely on the basis of the increased level of protein metabolism frequently associated with infection.

The therapy recommended for the treatment of cystinuria and cystine calculi has been designed to prevent the recurrence of calculi, since, if this can be prevented, little difficulty is to be anticipated. Two therapeutic measures are usually relied upon, a low protein diet and the administration of sodium bicarbonate in amounts sufficient to insure an alkaline urine.

Since, as already stated, there appears to exist a definite relation between the protein content of the diet and the amount of cystine excreted, restriction of the dietary protein should result in a diminished cystine output through the kidneys and hence in a lessened tendency to form calculi. Avoidance of certain kinds of protein foods (*e.g.*, eggs) in the diet has been sometimes prescribed), but in the opinion of the writer the quantity rather than the quality of the ingested protein is the important factor to be considered.

The use of sodium bicarbonate to insure an alkaline urine is based upon the greater solubility of cystine in alkaline than in acid reaction, the usual reaction of normal human urine. The maximal insolubility of cystine is at a pH of about 3.8; with increase in pH up to 6.0, the changes in solubility are slight; at a pH of 7.5, the solubility is increased about 50 per cent; while

in solutions more alkaline the solubility increases rapidly up to 1300 to 1400 per cent at a pH of 9.0. Alkalinization of the urine almost invariably results in the disappearance of cystine crystals from the urine. This, however, is not to be interpreted as signifying that cystine excretion has ceased, but rather that conditions for its precipitation are not favorable. That such alkali treatment may dissolve calculi already formed appears to have been demonstrated. In cases recently reported by Crowell and by Reaves, large cystine calculi, readily visible by X-rays, disappeared completely after treatment with alkali.

In conclusion it should again be emphasized that failure to detect crystals of cystine in the urine is not an adequate criterion of the absence of cystinuria. Frequent references appear in the clinical literature to "cystine calculi without cystinuria," "intermittent cystinuria" and to a cessation of cystinuria following operative removal of calculi. Such conclusions are not warranted unless *chemical tests* for cystine in the urine are negative. In every cystinuric individual regardless of whether cystine crystals are present or absent in the urine, the possibility of calculus formation may be anticipated at some time, unless proper control measures are taken. We know little more concerning the ultimate cause of cystinuria now than at the time of its discovery in 1810, but the application of the principles of biochemistry has made it possible to control the formation of calculi for the most part. The ultimate solution of the problem can be achieved only by careful and extensive metabolic and clinical studies of a large group of individuals who exhibit this unusual disturbance of metabolism.

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THE PRESENT STATUS OF PROSTATIC SURGERY

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In the early days of the old master surgeons, a patient with urinary obstruction was looked upon as a man who merely had an enlarged prostate; the obstruction per se was the one chief consideration. Thus the patient with a large prostate was subjected to operation without any preparation, the main idea being to remove the gland; little was thought about the damage to kidneys, heart and other organs indirectly caused by this obstruction, and little or nothing was done toward correcting these complications before operation. Looking at the subject from this viewpoint, there is small wonder that the mortality rate was very high.

The modern urologist has learned, from the experience of his predecessors, to consider the prostatic case from an entirely different angle. Today, he is looked upon as a patient who is suffering from the general systemic results of urinary obstruction and not simply from an enlarged prostate. True enough, the prostate may be considerably enlarged, yet, unless it causes urinary obstruction, it may never be discovered except possibly at the autopsy table. In other words, a man with two large lateral lobes may conceivably have no residual urine whatever, and consequently no back pressure, whereas, in another patient, the tiniest nub of subcervical enlargement or a small fibrous median bar, placed in a strategic position in the floor of the neck of the bladder may, like Horatius at the bridge, block the passage with ease, and, to mix the metaphor, may cause the most damaging back pressure with all its attendant insult to the whole bodily economy. It is a fact that a high percentage of men have enlarged prostates, yet relatively few of these require treatment for the condition: the enlargement must be of the obstructive type before symptoms of back pressure supervene.

Thus, today, regardless of the method of handling the obstruction, the first requisite in prostatic surgery is the preparation of the patient, or, in other words, the correction of those pathological conditions in the kidneys, heart, vascular system and other organs which have been brought about by

prolonged urinary back pressure. Before a patient is subjected to any type of prostatic surgery, his urea nitrogen and the functional activity of his kidneys should be brought to as near a normal level as possible. We have an arbitrary rule that a patient must have a urea nitrogen under 20 mg. per 100 c.c. of blood plasma, his functional secretory index must be in the positive phase, and his blood pressure be balanced in order to qualify him as a fair risk for prostatic surgery. Bearing these facts in mind, it is easy to understand why the mortality rate has been greatly reduced from a very high percentage to the present comparatively low figure, due to our present exhaustive methods of preparing the patient before mechanical intervention. The following rule for blood pressure, advocated by Thomas, is a good one to follow. *In low-tension cases, when the systolic blood pressure is 110 or less, the diastolic must be over 60; when the diastolic is less than 60 the systolic must be over 110. In high-tension cases when the systolic is 180 or more the diastolic must be less than 100; when the diastolic is less than 100 the systolic must not be over 180.*

In spite of our advancement in preparing prosthetics for operation and in spite of the fact that we have greatly reduced the mortality rate, there has been until recently no universally accepted radical change in the technic itself of removing the obstruction. Today we are entering upon a new phase in prostatic surgery, that of transurethral resection. The patient, of necessity, must be properly prepared before removal of the obstruction can be considered, regardless of the method of removal. In the future this preparation may, in the majority of cases, be carried out by catheter drainage instead of subjecting the patient to suprapubic cys-

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totomy with its accompanying shock, inconvenience and mortality rate. When he is properly prepared, his gland will, in many instances, be resected intraurethraly rather than be subjected to suprapubic or perineal enucleation. Consequently he will be allowed to go home, after a short period (three or four days) following the resection, thus doing away with the tribulations of these elderly patients, caused by infected urine drainage over an open wound. In addition, shock will be practically eliminated and the hospitalization markedly shortened. By the same token they will consent the more readily to an operation which is devoid of all these annoyances and thus will present themselves at an earlier period before severe complications have resulted.

John R. Caulk, in his address to the Philadelphia Urological Association, says "There is probably no operation in surgery which has done more to alleviate suffering humanity than prostatectomy, but in spite of years of progress in development of surgical technic and the marvelous improvement in the preoperative preparation of patients, the exercise of care and attention to decompression through drainage, and other general features with which you are entirely familiar, this surgical operation with its persistently high attendant mortality rate, in spite of both general and special attention, has as yet not fulfilled the ideal. For this reason surgeons from different corners of the earth have been prompted to devise measures less susceptible to danger, and at the same time effective in the relief of obstruction."

Guthrie, in his description of the cure of bars at the bladder neck, read in 1830, cautioned against attempting the removal of adenomata transurethraly, principally because of inability to control hemorrhage. This idea has been handed down and adhered to until very recent years. Mercier, Civiale and Leroy D'Etiolles even before 1850 devised instruments for removal of bars at the bladder neck. In 1874 Bottini proposed his galvano-cautery incisor. In 1901, Chetwood used a modified Bottini instrument in relieving contractures, working through a perineal incision. In 1909, Young presented his punch. In 1913, Stephens and Heitz-Boyer used high frequency through the cystoscope for minor obstruction. In 1914, Georges Luys presented his method of destroying prostatic obstruction by fulgura-

tion. In 1918 Braasch used a punch through a direct vision cystoscope. In 1919 Caulk presented his punch, and it is to Caulk that we owe the knowledge that this procedure can be applied to lateral and middle lobe adenomata and not solely to median bars. Later came Collings with his electro-urethrotome. It was in 1926 that Maximilian Stern presented his resectoscope, which was modified by Davis of South Carolina and successfully used in removing lateral and middle lobe enlargements. Then McCarthy presented his resectoscope, which brings us to the present status.

With the development of the Davis-Stern and the McCarthy resectoscopes, it has become possible for those properly trained in their use, successfully to resect the prostate gland transurethraly and to control hemorrhage just as efficiently as if it were done by the suprapubic or perineal method. Dr. Theodore Davis has performed approximately four hundred operations with the Davis-Stern resectoscope. We have all read his report in the Journal of the American Medical Association and marveled at his results. Many other men are now getting good results with both instruments.

We feel that the indication *par excellence* for transurethral resection is in those cases where the obstruction is still of moderate size and the complications as yet few. In the future we shall more readily recommend prostatic surgery of this type for early cases where we hesitated in the past because of the inconvenience and shock of the suprapubic or perineal operation. This early attack in itself will certainly tend to reduce the mortality rate. Resection, however, is contra-indicated in the presence of such complications as large infected diverticula, large bladder stones that cannot be crushed, and in those cases which, for one reason or another, do not tolerate catheter drainage. The size of the gland, primarily, is not a contraindication, it being possible to remove large offending areas by this method.

It has been the experience of all who have done prostatic surgery to see a very large gland shrink to half its original size after a few days of suprapubic drainage. Caulk has noted the same atrophic changes after removing the obstruction by means of his punch, and his observations have been confirmed by Davis, who has remarked upon this phenomenon repeatedly in cases in which the resectoscope was employed.

Davis states: "Examination by the cystoscope and post-mortem observations have demonstrated that it is the intra-vesical and intra-urethral encroachment of the gland that causes the obstructive features of prostatism. Experience gained during the past five years on more than two hundred resections has convinced me that it is not necessary to remove the entire gland in order to relieve the patient's symptoms, it being necessary to remove only that portion producing the obstruction. With the resectoscope, it is possible to remove the entire gland completely under direct inspection and rectal palpation with the sheath of the instrument in situ. Excellent results have been obtained by limiting the operation to removing the obstructing tissue only." If the gland is of large size, it can be removed by a two-stage resection, one lobe being removed at one time and the remaining tissue resected a few days later. If, after resection, recurrence of obstruction should come about at a later date the procedure could readily be repeated. However, over an experience of several years it has been noted by different observers that this has rarely been necessary. But along this line it must also be borne in mind that obstructive signs do recur at times in prostatists who have been operated by the older methods.

In the past what has the urological surgeon been able to offer the patient suffering with carcinoma of the prostate? Usually a *permanent* suprapubic drainage was instituted and either radium or X-ray treatment administered. Now, with the newer method of procedure his obstruction can be removed transurethraly, assuring him comfort, and all the annoyance of a permanent urinary fistula is obviated. This can be supplemented by radium and X-ray treatment. To quote Davis again: "In every case of malignancy it has been possible to restore to these unfortunates the ability to empty the bladder through the natural passage, without the discomfort and inconvenience of permanent suprapubic drainage. All these patients have resumed their usual vocations, which permanent suprapubic drainage would have prohibited."

We do not wish to convey the impression

that in the future all cases of urinary obstruction will be cared for by resection. As time passes we shall be able to classify with greater certainty the indications for this type of procedure. But we do feel that the old dictum "Catheterize if you must and operate if you dare" is obsolete and does not apply to the future attack on this group. May we predict that, with the passage of time, this class of case will be operated earlier, when fewer complications are present and when better results can be obtained, instead of waiting until the added complicating factors greatly jeopardize the patient's successful recovery? 'Transurethral resection is not a specific means of handling all cases of urinary obstruction but certainly its judicious and efficient use will eliminate much suffering, particularly in cases of prostatic carcinoma, median bar formation and early glandular enlargement; it will greatly shorten hospitalization, and, indeed, may save the lives of many of these elderly sufferers, who, because of their poor general condition, could not survive a major procedure.

But to all and sundry, a final admonition against excessive enthusiasm is obviously indicated.

If this procedure is to survive the acid test of time without tremendous setback it must be attempted by those specialists only who are thoroughly familiar with the appearance of a normal bladder neck and who are willing to spend the required time and energy perfecting themselves in the technic of the operation; which, when properly executed, is difficult to learn. The mere removal of a few cuts is not sufficient. The entire obstructive tissue must be removed to get permanent results.

In the language of McCarthy, the new method deserves deliberate discerning investigation and judicious evaluation. In his words, "It will not be fostered by impulsive decision, nor will it on the other hand be hindered by prejudicial neglect." We agree with him that if time and accumulated experience treat it as kindly as those working with it suspect, it will go forward by its own natural momentum.

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PRIMARY ILEOSTOMY IN THE TREATMENT OF GENERALIZED PERITONITIS*

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The mortality rate of general peritonitis is almost universally reported at 50 per cent or better. Drs. McRae and Collar¹ last year at this meeting reported nineteen cases with a death rate of 52.6 per cent. Few conditions that the surgeon is confronted with can boast such a formidable figure. Therefore anything that shows the slightest indication of reducing this mortality rate is worthy of consideration.

The treatment here advocated is based on the premise that every patient dying of general peritonitis following appendicitis dies of intestinal obstruction. While every case of this type does not become obstructive in nature, it is potentially so from beginning to end and should be treated as such before obstructive symptoms supervene rather than after they have dominated the picture.

The clinical picture of acute intestinal obstruction is too well known to necessitate repeating, but it does not seem to be universally recognized that the late stage of general peritonitis is its mirror image, including the pronounced changes in the chemistry of the blood: the fall in blood chlorides, rise in CO₂ combining power of the plasma, rise in non-protein and urea nitrogen, as first observed by Tileston and Comfort.² Haden and Orr^{3, 4} conclusively showed the effect of the administration of chlorides on the blood chemistry in experimental dogs as well as in man with obstruction, but it must not be forgotten that the continued beneficial effect of such treatment is contingent also upon the removal of the obstruction and release of the highly toxic contents of the intestinal canal. This can be accomplished only in two ways—either by normal evacuation or by surgical drainage.

It is a common experience for every surgeon to do an emergency operation for general peritonitis, only to return some hours later to find the condition of his patient probably considerably worse than he would have been in the same time unoperated. Some of them improve later, but many become rapidly worse and require a secondary operation to perform enterostomy, following which the great majority soon die. In this connection it is also common experience to note the rapid change for the better follow-

ing formation of a spontaneous fecal fistula. Our experience with secondary enterostomy has been a perfect failure with 100 per cent mortality. Lakoff,⁵ in relating a series of acute appendicitis, reports nine secondary enterostomies with 100 per cent deaths.

It was this experience which led us to adopt primary ileostomy as a routine treatment for all cases of generalized peritonitis. The first case was operated on September 28, 1926. Since that time nineteen such cases have been operated in a similar manner, with three deaths, or a death rate of 15.7 per cent. All nineteen cases here reported had identical etiology, namely, acute appendicitis. We have also performed ileostomy for peritonitis due to other causes, such as traumatic conditions, perforated ulcers, pneumococci infections, and mechanical obstructions, but for purely statistical purposes and to judge the merits of the procedure we have included only those having perforative appendicitis as an etiologic basis.

That this is not a new procedure is shown by the fact that Huebner⁶ reported its use by Heidenhain as early as 1902 and Victor Bonney⁷ reported six cases with recovery in 1916.

Lane⁸ advocated the use of a semi-permanent ileostomy in 1917 and more recently many others have used enterostomy of some sort or another but only in selected cases, these usually the most severe. So far as we know, Clute⁹ is the only other to report the routine use of primary enterostomy in generalized peritonitis.

Of the nineteen cases included in this report, there were thirteen males and six females. The youngest patient was seven years old and the oldest fifty-six or average age of 34.5 years. The duration of illness before operation, the shortest time was two

*Read before the Section on Surgery, Michigan State Medical Society, Pontiac, Mich., September 23, 1931.

†Dr. Baumgarten graduated from the University of Michigan, A.B. 1915, M.D. 1918; spent two years in residence in the surgical clinic, Ann Arbor, and a year in the Research Hospital, Kansas City. He located in Detroit in 1921. His specialty is surgery.

days and the longest fourteen days. The average duration of illness before operation was 5.7 days. The appendix was removed in thirteen instances and not removed in six. The diagnosis of generalized peritonitis was based on the clinical symptoms together with the finding of free fluid pus, fibrinous exudate between the coils of bowel and the inflamed condition of the peritoneal covering of the intestine.

Of the patients who recovered, the shortest time in the hospital was 14 days, the longest was 67 days. The average hospital stay was 24.6 days.

TECHNIC

The technic used is very simple and has been the same in all cases. The incision of choice is made. If the appendix can be removed easily, this is done. We do not believe it wise to make any undue effort in this direction, thereby breaking down existing natural barriers against the further spread of infection. The terminal ileum is brought up as carefully as possible. A purse string suture of circumcision catgut is placed in the antimesenteric border, after which a stab wound is made either with the cautery or sharp pointed scalpel. A No. 24 French catheter with multiple openings is inserted through the opening and caught with one bite in the purse string. The tube is then invaginated. A second purse string is placed around it, caught through the tube and tied. The tube is then brought through the omentum if possible. If there is a localized abscess a soft rubber drain is inserted, otherwise no drainage other than that provided by the enterostomy tube is used.

There is considerable difference of opinion as to the part of the bowel in which the tube should be placed. We believe that the colon can usually be emptied by enemata, and, moreover, is seldom found to be distended. The terminal ileum is usually easily accessible and the most common site of paralytic ileus, and is found usually filled with quantities of liquid feces, which should be evacuated. There is less irritation of the skin from the discharge and less disturbance of digestion and absorption than is the case with jejunal fistulae, should the latter be rather slow in closing.

We have resorted to secondary closure of the fistula in only one instance and this we are satisfied would have closed spontane-

ously had not the patient insisted that it be closed at once.

Clute⁹ believes that he obtains better results with jejunostomy. His results with ileostomy, however, were based on secondary as well as primary operations, which, we believe, accounts for this difference.

POST-OPERATIVE COURSE

The patient is placed in bed with the head elevated. Nothing is given by mouth for at least twenty-four hours. Sufficient sedatives are given to control pain. As much as possible of the bowel contents are drained and aspirated immediately. From 200 to 300 c.c. of 5 per cent glucose in 2 to 5 per cent salt solution is instilled through the tube every three hours—the tube remaining clamped for two hours and allowed to drain one hour. We have given the solution by the drip method but this does not seem as satisfactory as does the instillation of a large amount of fluid at one time. This often produces a free, liquid evacuation of the bowel within a few minutes after entering the intestine. It is really surprising to note the rapid disappearance of distension and vomiting. There is no complaint of thirst and ketone bodies soon disappear from the breath and urine, with the rapid restoration to normal of the disturbed acid-base balance of the blood. The tube usually comes away spontaneously within four or five days with almost immediate closure of the fistula. In two instances in this series it has been necessary to reopen the fistula after the tube was removed because of the recurrence of obstructive symptoms.

FATALITIES

Of the patients who died, the first was a male aged 44, who had been ill seven days. He entered the hospital in a very critical condition. Temperature was 97.6, pulse 144, respirations 45. The blood showed 100 mgms. chlorides per 100 c.c. He died three hours after operation.

The second was a female, age 27, who had been ill five days previous to admission and lived eight days after. Her pulse was 140 on admission, at no time dropping below 120. Her temperature continued to rise and was 105 at death. At no time after operation was there vomiting or distention of the abdomen. She expired eight days after operation, with a non-protein nitrogen of 35.8 mgms. per 100 c.c. and blood chloride

of 593 mgms. per 100 c.c. Death in this case was apparently due directly to the results of bacterial toxemia.

The third case was a female child of ten. She had been sick four days previous to admission. For some unknown reason we were unable to obtain satisfactory drainage from the tube. Death occurred thirty-six hours after operation, with all the symptoms of paralytic ileus and obstruction. The laboratory findings were not recorded.

CONCLUSIONS

1. Patients with generalized peritonitis of appendiceal origin should be treated as cases of intestinal obstruction.

2. Intestinal drainage is paramount in the treatment of these cases.

3. Primary ileostomy is a satisfactory means of securing intestinal drainage, controlling dehydration and the acid-alkali balance of the blood plasma.

4. Persistent fecal fistula is not a common complication.

5. Nineteen cases of generalized peritonitis following appendicitis are reported, with three deaths, or mortality rate of 15.7 per cent.

3528 VAN DYKE AVENUE

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THE PRACTICE OF MEDICINE BY CORPORATIONS*

A PARTIAL SURVEY AND STUDY OF PROBLEMS INVOLVED

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To The Federation of State Medical Examining Boards of the United States:

SECTION I. TRANSMISSION

President Rypins, in a letter dated June 17, 1931, appointed the writer to make a survey and study, to formulate conclusions and to make recommendations on the subject of "The Practice of Medicine by Corporations." The appointment was accepted. I have the honor of transmitting to this Federation my findings.

These deductions are not to be construed as authoritative. Undoubtedly attorneys will be able to cite exceptions. The quest has been to present the question as a whole, to cite certain conclusions and to advance tenable recommendations.

SECTION II. DEFINITIONS

In order that we may approach this problem from a common basis, it is desirable that definitions and an initial premise be defined and stated.

a. *Practice of Medicine*.—Every state law defines in greater or less extent what constitutes the practice of medicine. Some

statutes are rather vague and general in their definitions. Other states have included in their law a most carefully worded, specific and inclusive definition. The courts of every state have, as a rule, defined the practice of medicine and rendered decisions and rulings in accordance with such definitions. It may be assumed in general that the definition of "practice of medicine" has been ruled upon and established by the highest court of every state. So for illustrative purpose alone I include the Michigan definition which has been sustained upon several occasions by the Supreme Court of Michigan and which is as follows:

In this act, unless otherwise provided, the term "practice of medicine" shall mean the actual diag-

*Presented before the American Medical Association Conference, Chicago, February 15 and 16, and also before the Kent County Medical Society. At the Chicago conference this was pronounced the "most exhaustive résumé on the subject presented to date."

nosing, curing, or relieving in any degree, or professing or attempting to diagnose, treat, cure or relieve any human disease, ailment, defect, or complaint, whether of physical or mental origin, by attendance or by advice, or by prescribing or furnishing any drug, medicine, appliance, manipulation or method, or by any therapeutic agent whatsoever.

b. *Corporation*.—"Any body consisting of one or more individuals, treated by law as a unit and to act as a single person."

c. *Corporation Powers*.—The states of the Union have enacted legislation and set forth the powers and privileges of a corporation.

In general it can be stated that a corporation acting within the scope of its charter can do, act and serve the same as an individual except where federal and state laws set up limitations and restrictions.

"A corporation is a fiction and exists only in legal contemplation." "It is an impersonal entity." It is an artificial person created by statute. It can act only indirectly and then only through persons or agents. A corporation, as an artificial person or entity, cannot act, practice, serve or function, nor can it assume the role of a living individual or person so defined or cited in laws that govern and supervise individual rights and privileges, or the laws that convey conditional individual license and regulatory provisions. There exist a wilderness of court decisions sustaining this contention. The courts have gone even further in declaring that even though a corporation has been incorporated, obtained a legal charter and in its articles of incorporation has declared its intent, purposes and scope of business, nevertheless it will be amenable to penalties if it violates existing laws that are applicable to individuals.

While a corporation is made up of men and women, one of its outstanding characteristics is that it exists and functions as a corporate organism separately and apart from the men and women who compose it.

The charter of a corporation determines its nature and function. While law texts say a corporation is a legal entity, yet it often functions as a very real living thing in the life of a community. Corporations own and operate universities and institutions of learning. Hospitals and welfare agencies are owned and operated by corporations; banks, street car lines, lighting systems are owned and operated by corporations. Foods, drugs, household needs, building and loan associations are manufac-

tured, operated and give public and home service under corporate ownership and guidance. Therefore it is difficult and confusing to conceive of these corporations as being only "legal entities."

It must also be remembered that a corporation is an organism that receives its authority and power solely from the state. It derives no authority or power from its component members. The fact that every member of a corporation is licensed to practice medicine does not endow a corporation with authority so to practice. The same holds true in the field of corporate law and dentistry. Authority and power ever descends downward from corporation to agent and never from agent to corporation.

Without entering deeper into the bewildering voluminous legal discussions and comments, the following premise is assumed: A corporation cannot function as a natural individual where law specifically states and defines the natural individual and confers upon him definite personal, individualistic rights and privileges.

SECTION III. LICENSES

It is well sustained by decisions rendered by Federal and State Supreme Courts that "the police power of a state may be exerted in the form of state legislation—when such legislation bears a real and substantial relationship to the public health, safety, morals, or some other phase of public welfare." The practice of medicine is something vitally touching and affecting the public health, and, therefore, a matter for the regulatory police power of each state.

The regulatory acts of every state include this fundamental in the title and wording of their laws.

The license to practice medicine is an inherent right of every individual provided he complies with all the laws and regulations governing the exercise of that right. It is a legislative privilege or grant, based and issued under definite and well defined conditions, conferring certain clearly designated rights and privileges to the individual engaged in the practice of medicine.

It is strikingly fundamental to the formation of a final opinion and decision to note well that in the laws of every state an outstanding designation is employed. All stress "person or persons," "he or she" and thus emphasize the *personal natural entity* in every legislative enactment governing

medical practice. In court pleadings and decisions "law," "medicine" and "dentistry" are classified and recognized as learned professions.

The laws of every state of the union incorporate a mandate that every person or individual who sets forth or holds out to practice medicine shall first obtain a license to do so from a created and designated board or body that the law endows with definite regulatory and police powers. These laws define the conditions under which a license is to be obtained and the qualifications that one must possess to be eligible to secure licentiate rights and privileges. Likewise these laws all incorporate conditions to be observed and complied with in order to maintain a continuance of the license. Each state law specifically sets forth the acts and practices that form a basis for violation of the licentiate's privilege and prescribes the causes and methods for revocation of the license.

Again it should be carefully noted that each law provides:

a. A penalty for practicing medicine without a license and this is a common wording—"Any person," or "he or she," or "any individual" who practices medicine within the definitions of the law without obtaining a license, as provided by the law, shall be guilty of misdemeanor and specifies the punishment for conviction. In some states violations are defined as felonies.

b. The possessor of a state license may or shall have his license revoked if he engages in certain specified acts, or resorts to certain practices, or if he is convicted for certain offenses, in courts of competent jurisdiction.

In all of these provisions reference is made to "person" or "individual."

A corporation seeking authority to practice medicine would fail instantly when called on to show that it had adequate pre-professional education and professional training. It could not show that it had attended college or served an internship. A corporation could not submit to an examination to determine the nature and extent of its knowledge of medicine.

When the State grants to an applicant a license to practice medicine it authorizes him alone so to practice. It does not authorize him to delegate that right, or any part of it, to any other person. A licensed physician has been convicted of practicing medicine

without a license where he undertook to cover the activities of an unlicensed practitioner by authorizing him to examine patients and to prescribe for them in his name. (*Golvin et al v. State (Okla.)*, 131 Pac. 546.)

The agent of a corporation who undertook to vest in the corporation any part of the authority granted to him by the State to practice medicine would certainly, in the State in which that decision was given, be guilty of unlawful practice, and probably the same principle would apply in other states. If this principle should be invoked against physicians who serve corporations in the corporate practice of medicine, it would serve as an effective check on such practice.

This sectional comment may be summarized as follows:

- a. State enactments require that each person or individual who desires or intends to practice medicine must apply for license.
- b. Meet well defined requirements to qualify for a license.
- c. Must observe the conditions under which the license is obtained.
- d. When found guilty of certain acts or practices his license is subject to revocation.
- e. He commits a misdemeanor or felony if he practices without a license.
- f. No reference can be found conveying the right to a corporation to obtain a license or to practice medicine.

SECTION IV. LICENSING OF LEARNED PROFESSIONS

It is necessary at this time to refer briefly to the accepted and established decisions rendered upon state rights to issue licenses to members of the learned professions. The principle is well founded. Every state has enacted governing laws that are clear in purpose and provisions.

Law, medicine and dentistry are learned professions. Neither is an ordinary trade or calling which all citizens alike may pursue. Only those who are qualified by statute, by study of the science and art and by experience to practice may so engage if the legislature sees fit to so ordain.

One is unable to find a contrary authority or cite a single text advancing a contrary view upon this well established licensing legislation. To so license is within the regulatory or police powers of a state.

It is likewise held that to obtain and hold such license is not an unconditional inherent right of man. Neither is it an unconditional, inalienable right sustained by the federal constitution and vouchsafed by the

fourteenth amendment. In the last analysis it is merely a conditional grant or privilege.

One again finds a wilderness of citations sustaining this principle. They deal with medicine, law, dentistry, optometry, architecture, chiropody—in fact with every human endeavor that legislatures have recognized by providing governing statutes.

This fact forms a second fundamental that has a vital bearing upon a final conclusion.

SECTION V. FUNCTIONS OF CORPORATIONS

When the question is raised as to the rights, functions and powers of corporations one is at once thrust in the high impenetrable maze of corporation law—a well recognized law speciality. I would not pose as one able to set forth summarized deductions and conclusions that would constitute axioms or unassailable opinions. I content myself with the reasoning and opinions handed down by two Supreme Courts—California and New York. I submit them as being the crux of this entire question.

1. "A corporation is a fiction and exists only in legal contemplation."

2. "A corporation, as such, cannot subject itself to an examination or itself possess any of the necessary requisites to practice medicine."

3. "It is physically impossible for a corporate entity to be licensed to practice medicine or surgery."

4. A corporation is denied the right to practice law or dentistry. The practice of medicine depends upon the skill and learning of the practitioner and a corporation cannot reflect personal skill or learning.

5. A corporation, as an impersonal entity, cannot be conceived as a personal entity judging the nature, character or symptoms of disease or determining the proper remedy. Members of the corporation, or persons in its employ, might do these things, but the corporation itself is incapable to do them.

6. A corporation cannot pass an examination and obtain a license.

7. A corporation cannot be master over a servant over whose acts it could have no power of supervision (the employed physician).

8. A corporation could violate every in-

hibition of a medical statute and be immune from punishment.

9. A corporation license could not be revoked for it would have no license to practice to revoke.

10. The Board could not revoke the license of a physician employed by a corporation for any acts of a corporation because they could claim they were not liable for the acts of their employer.

11. Physicians employed by a corporation are its servants and agents. They are bound to do its bidding.

12. A corporation cannot practice medicine directly and so it cannot practice medicine indirectly for that is an evasion which the law will not tolerate.

13. Corporate law authorizes corporations to carry on any lawful business but not unlawful business. To practice medicine without a license by a corporation, and a license cannot issue, would be an unlawful business.

14. Legislatures, in authorizing corporations to carry on lawful businesses, did not intend to include the learned professions.

15. A person has no absolute or constitutional property rights to practice a profession such as law or medicine; and if a natural person, a human being, is unable to so engage in professional practice, a private corporation, an artificial person, cannot assume or claim that right.

16. A corporation cannot register as a physician.

17. A corporation in name cannot possess medical knowledge of itself.

18. The Supreme Court of California holds:

a. A corporation may be formed for any purpose for which individuals may *lawfully* associate themselves.

b. California individuals may not singly or in association engage in the practice of medicine without a special license so to do, neither can a corporation.

c. A corporation, as a corporation, cannot pass a medical board's examination.

d. You cannot do indirectly that which you cannot do directly.

e. Corporation practice of medicine is illegal.

With these citations I leave this phase of the subject realizing quite fully that it is possibly miserably inadequate and only partially representative of a digest of opinions or rules. It should, however, serve in aid-

ing one to perceive the attitude of our courts.

SECTION VI. PRACTICE OF MEDICINE IS AN INDIVIDUALISTIC ACT OR ART

In an issue before the bar such a statement would necessarily demand substantiation. In this discussion and before this group I do not deem it necessary to so argue.

I rest the point with this statement. The practice of medicine, the relationship of patient and physician, is individualistic. It cannot be transferred to, or assumed by, a corporation for the relationship is very personal, and a corporation cannot assume a personal rôle. Lastly, he who practices medicine assumes a personal responsibility of a nature that cannot be assumed by a corporation.

SECTION VII. ATTITUDES OF STATE REGISTRATION BOARDS

A questionnaire was sent to the Secretary of every State Board. Thirty-three Secretaries replied. These data were obtained:

1. The courts of twenty-three States have rendered no decisions on corporation practice.
2. Ten courts in ten States handed down opinions that corporation practice of medicine was illegal.
3. Seven Attorney Generals have given the opinion that corporation practice is illegal.
4. Boards of twenty-four States have not considered the question or have had no occasion to consider it.
5. Five State Boards report that corporations have applied for a license but were denied their application.

The detailed answers are imparted in an appendix to this study.

From the foregoing it is quite apparent that there exists a tendency toward opening the doors for legalizing corporate practice. The adverse court decisions undoubtedly have restrained a nationwide movement to that end. An entering wedge is sought. Whether it will be found I am disinclined to state. There are borderline organizations dangerously close and it is well that their practices be closely scrutinized.

SECTION VIII. INCORPORATED HOSPITALS AND CLINICS

This group is closely intermeshed and impinges upon our problem. We are all aware that there are incorporated hospitals practicing medicine and a large number of clinics hold corporate articles.

I undertook to review the laws and rulings but it was not long before I perceived a myriad of ensnaring legal exceptions and exemptions. Medical practice by hospitals is a grave medical economic problem.

In general it may be said that whether a hospital can enter in competitive medical practice depends upon the laws under which corporate articles are issued, the exemptions from existent practice laws that are specified legally in the articles and the purposes for which incorporation is sought and accomplished. An answer involves all these factors. A guiding answer and position can only be sought from the courts. Each hospital and clinic must be adjudged individually after a thorough investigation of its practices and the soundness of its legal rights.

In studying the corporate practice of medicine and its effects, the distinction must be drawn between the treatment of the defective, sick, and injured, by corporations organized for that purpose, and the treatment of the defective, sick, and injured at the expense of corporations, and under their direction, *as an incident to the carrying out of other purposes for which the corporation was organized*. In the first place, as has been shown, the practice of medicine by corporations seems to be clearly unlawful. When, however, a corporation engaged in industry or an insurance corporation employs physicians to treat the defective, diseased and injured, a somewhat different relation arises. The normal relation of a physician to such corporations is that of an independent contractor, not that of an agent or employee of the corporation. His relation to the corporation employing him is identical with the relation that exists between a physician who is called on by the parent of a sick child to treat that child and the parent himself. In the latter case one would hardly say that the parent was practicing medicine because he had employed a physician to treat the patient for whose care he was responsible and incident to the relationship existing between them. Similarly,

one would hardly say that a manufacturer who employed a physician to treat employees injured in the course of business was practicing medicine.

The exact relation of incorporated hospitals, dispensaries, and clinics to the corporate practice of medicine is more difficult to define. Possibly those that are incorporated primarily for the relief of the sick and injured might be held not to be practicing medicine as a business, if they assumed primarily to furnish only hospital and nursing accommodations. Medical attendance might be regarded as a mere incident to the furnishing of such accommodations. On the other hand, corporations organized for the purpose of conducting hospitals, dispensaries, and clinics for profit, with the prime object of furnishing medical services, would seem to be clearly within the category of corporations practicing medicine.

SECTION VIII (2). WOULD OR WOULD NOT THE PRACTICE OF MEDICINE BY CORPORATIONS REACT TO THE ADVANTAGE OF THE COMMUNITY, NOW AND IN THE FUTURE?

In discussing this matter, it is necessary to consider the practice of medicine by corporations organized for that specific purpose as something apart from the practice of medicine—if it be the practice of medicine—by industrial corporations as an incident to their main business, by hospitals, dispensaries, and by clinics. In favor of corporate practice it has been urged:

1. That medical services could be more cheaply rendered by a corporation, because of its more efficient business organization and the volume of practice that it would do.

2. It has been urged that the practice of medicine by corporations would be more efficient than the practice of medicine by individual physicians, because of the greater ease with which the services of specialists would be divided by corporations, and at a lower cost.

3. It has been argued that the practice of medicine by corporations would be more efficient than the practice of medicine by individuals, because medical directors, supervisors, and consulting physicians would see that the medical staff generally rendered medical service of the higher type, if for no other reason than to protect the corporation from suits based on malpractice. The prac-

tice of medicine by corporations, it has been said, would simplify the choice of physician by a patient, for the patient would have to do nothing more than to select a reliable corporation, and then trust him to general practitioners and specialists provided by it.

4. The practice of medicine by corporations, it has been suggested, might render it easier for a patient to collect damages in the event of malpractice, because of the greater difficulty that a corporation would have in concealing its assets, as compared with the possibility of the concealment of assets by an individual physician.

The alleged advantages are based on the presumption, of course, that a corporation practicing medicine would be operated according to the best of moral, ethical, and professional standards. Just how corporations would be compelled to operate in that manner is not clear. Even under the rigid supervision exercised by the Government over our banks, banking institutions supposedly of the highest order fail, and the stockholders and depositors lose their money. Just so, corporations engaged in the practice of medicine would, under the best of supervision, occasionally fail, with a loss, not of money, but of health and of life. The lack of *personal* responsibility on the part of the officers of the corporation, other than the attending physicians directly in charge of patients, would not tend to establish and maintain the best morale in such practice. The intimate personal relationship between physician and patient would tend to disappear. Of course, a patient would still be at liberty to employ a physician not practicing under the supervision, direction, and control of a corporation, but whether private practitioners could exist in competition with corporations with the ability of the corporation to make a popular appeal and to give cut rate services, is questionable. Whether the conversion of physicians into the hired men of corporations would tend to produce the most desirable class of men to enter the practice of medicine is questionable.

The exact relation of incorporated hospitals, dispensaries, and clinics to the problem of the corporate practice of medicine requires further study. The matter involves questions relating to so-called open and closed hospitals, the free choice of physicians by injured and sick workmen, and the incorporation of physicians into legally

organized clinical groups for the purpose of conducting a joint practice. If corporations are to engage in such work, and doubtless many of them will continue to do so, it seems probable that special legislation should be enacted to govern their organization and management.

SECTION VIII (3). WOULD OR WOULD NOT
THE PRACTICE OF MEDICINE BY COR-
PORATIONS REACT TO THE ADVAN-
TAGE OF THE MEDICAL
PROFESSION?

That the practice of medicine by corporations would tend to reduce such practice to a business and to destroy it as a profession seems probable. That it would break down the intimate and independent relations between physicians and patients and thus debase the social and professional standing of physicians also seems probable. Probably, too, it would tend to make the incomes of physicians more nearly dependent on their years of practice under some corporation than on their professional ability, and thus diminish individual initiative and interest. That these handicaps would tend to prevent the most desirable type of men from entering on the practice of medicine seems likely.

SECTION VIII (4)

The corporate practice of medicine is with us, in the form of incorporated clinics, and is probably here to stay. Other corporations that might be named are either actually practicing medicine or they are trenching so closely on the medical field that their activities cannot be distinguished from medical practice. Until the medical profession knows the reason for the development of such corporate practice, its probable effect on the community, and its probable effect on the medical profession, it should hesitate either to approve corporate practice generally, but should undertake to find some way in which advantages of such practice, if it has any, be preserved and augmented, and its disadvantages be eliminated.

SECTION IX. SUMMARIZATION OF
PRECEDING SECTIONS

I have endeavored to generalize the recorded opinions and decisions, the principles involved and the fundamentals that are related to the general question. I trust I have established the following points:

1. Every state of the union has enacted a law governing the conditions under which an individual can legally practice medicine.

2. Every state demands that the individual obtain a license and specifies the requirements that must be met ere he is eligible to secure a medical license.

3. Every state provides for the penalization of the individual who practices medicine without a license.

4. Every state provides for the revocation of a licentiate's license whenever he is found guilty of certain practices that are defined under the general term of "unprofessional conduct."

5. Every state law stresses the individual, a personal entity, "he or she."

6. No state law includes any provision for the issuance of a single or blanket license to a corporation or an associated group authorizing such group or corporation to legally engage in the practice of medicine.

7. Federal and State Supreme Courts have handed down numerous decisions that license to practice medicine, law or dentistry is not a common property right, an unconditional inherent right of a citizen as defined in the fourteenth amendment.

8. Federal and State Supreme Courts incontestably hold that the state, under its police power rights, may enact regulatory measures for the protection of the public.

9. Corporations exist only in legal contemplation. They are impersonal entities endowed with certain personal powers.

10. A corporation cannot act illegally and inasmuch as a corporation cannot obtain a license it cannot practice medicine for that would be illegal, for a license is imperative for legal practice.

SECTION X. UNTOWARD CONDITIONS THAT
WILL ARISE IF CORPORATIONS ARE EM-
POWERED TO PRACTICE MEDICINE

I shall briefly relate ethical and actual factors that should abet the resistance to consenting to or condoning corporate practice of medicine.

It is an accepted legal rule that the relationship of patient and physician must be confidential and inviolate. The reasons for this rule are apparent but cannot be observed in corporate practice.

Our accepted Principles of Ethics sets forth the following:

Principles of Medical Ethics of the A. M. A.:

Sec. 2, p. 19.—It is unprofessional for a physician to dispose of his services under conditions that make it impossible to render adequate service to his patient or which interfere with reasonable competition among the physicians of a community. To do this is detrimental to the public and to the individual physician, and lowers the dignity of the profession.

It was well set forth in the California brief that corporation practice of medicine would be inimical to public welfare for the following reasons:

"If, in the last analysis, corporations are allowed to practice medicine as a general proposition, it is the opening wedge to the commercialization of the practice of the learned profession of medicine, and permits the creeping in of many unethical and uncontrollable factors which the law has heretofore sought to avoid. One of the main objections to allowing a corporation to practice medicine would be unquestionably the inability of the state to control the practice of medicine by a corporation as it does control it now under the Medical Practice Act, as each member of the profession comes directly under the Medical Practice Act and the corporation herein does not. Unprofessional conduct on behalf of the corporation could not be reached, such as aiding in or betraying a professional secret, advertising, or offenses involving moral turpitude, and many others too numerous to mention."

The legal profession, were corporate practice of law legalized, would still have a remedy to control and prevent questionable practice and conduct which would not pertain to corporate practice of medicine. Lawyers who are admitted to practice are officers of the courts. Their conduct and practices are under court supervision and control. Lawyers are amenable to Court discipline. Lawyers are therefore in a different category from physicians. State boards do not have this jurisdiction to supervise and control doctors.

SECTION XI. CONCLUSION

I believe that the following conclusions are warranted: Corporate practice of medicine, legalized, would be tremendously inimical to the people, state and nation. It would exert a detrimental influence upon the progress of scientific medicine and medical education. It would reduce a profession to a trade occupation, thereby sacrificing all our sacred traditions, and debase the art of med-

ical practice. It would terminate the sacred relation of patient and physician. Corporate practice of medicine should not be condoned, tolerated or abetted. Such an invasion in the social life of the people should not be consummated.

SECTION XII. RECOMMENDATIONS

1. That every State Board and Medical organization discourage any and all movements having for their purpose the institution of corporate medical practice.

2. That all State Boards and Medical organizations exercise every legitimate influence to defeat legislation intended to legalize corporate medical practice.

3. That we join with the professions of Law and Dentistry in circumventing any such invasion of learned professions by corporate bodies or groups.

4. That every State Board deny any and every application, filed by a corporation to secure a license to practice medicine and defend their position vigilantly and strenuously through the courts of last resort.

5. If this Federation concurs in the presentation and facts herein contained, that this report be adopted and acknowledged as an expression of policy that will be assumed and defended.

SECTION XIII

I bespeak your indulgence of my inability to have confined the discussion to a more limited verbiage. The voluminous references that were reviewed precluded attaining such desirable limitation. The temptation was to enlarge upon specific cases, cite the actual words of learned judges and to quote from law texts. To have done so would have been a travesty upon your patience. For similar reasons I omit a lengthy list of references which are, however, available. Lastly, I acknowledge that I have lifted, en toto, many sentences and paragraphs from some of the consulted references and authorities and the comments advanced by the Bureau of Legal Medicine and Legislation of the A. M. A.

SEPTIC ABORTION ASSOCIATED WITH MENINGOCOCCIC MENINGITIS

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The association of a case of septic abortion and epidemic meningitis is in our opinion worthy of discussion. The history of this case is rather meager as to exact details of the onset of the abortion. Although positive information of actual inducement of abortion is lacking, certain information indicates that this occurred. Attempts to find out yielded no definite information as to the facts.

The patient was a married woman, twenty-three years of age, with one living child, and gave no history of previous miscarriages. On January 7, 1932, she began to complain of severe cramps in the lower abdomen associated with moderate vaginal bleeding. At this time the temperature was normal and the patient was treated conservatively in such manner as to prevent the abortion. She had a history of a three months' amenorrhea associated with usual presumptive signs of pregnancy. On January 8, 1932, the family physician was called and the patient was found to have had a severe chill, with a temperature of 105 degrees. At this time bleeding was quite profuse. On January 9, 1932, the fetus was expelled and throughout that day the temperature was normal. On the evening of January 10, 1932, the patient complained of severe headache. She was admitted to the Wyandotte General Hospital on January 11, 1932, and was found to be very drowsy and lethargic.

The physical examination revealed a well developed, well nourished, white female adult lying quietly in bed, whom efforts to rouse were unsuccessful.

Head: Negative. Neck: Rigid. No adenopathies. Thyroid not palpable. Eyes: Pupils were equal and regular and reacted sluggishly to light. There was a converging strabismus of the right eye. Ears: Drums normal. Mouth: Teeth good. Tongue moist and not coated. Pharynx not injected. Nose: No deviation of septum. Mucous membranes normal. No obstruction.

Chest: Percussion note was resonant throughout. Breath sounds vesicular in character. No râles or rûbs were heard. Respirations were 26 per minute.

Heart: The cardiac area as elicited on percussion was normal. Apex impulse not visible but normally palpable. Heart sounds were forceful in character, and regular in rhythm. No murmurs were heard. The radial pulse was 100 and bounding in character. Blood pressure was systolic 130, diastolic 90.

Abdomen: Slightly rounded. No muscle spasm nor rigidity. The liver was not enlarged. The spleen was not palpable. In the left lower quadrant was found a firm rounded mass rising from pelvis which on bimanual examination was found to be the uterus. This extended half way up to the umbilicus. No other masses were felt.

Pelvis: There was a very foul smelling sanguinous discharge from the vagina. Pelvic examination under aseptic precautions revealed uterus to be enlarged as previously noted. In the cervical os was palpated friable tissue, probably placental in origin. Cervix was soft but contracted down on the tissue.

Extremities: Negative.

Reflexes: Neck was markedly rigid; Brudzinski's sign was moderately present; Kernig's sign was

positive; biceps and triceps reflexes were normally present; knee jerks could not be elicited on either side; umbilical reflexes were absent; Achilles reflexes were normally present; plantar reflex absent; Babinski reflex not present.

At this time the laboratory findings were as follows: Blood: Hemoglobin, 80 per cent; white blood count, 24,000; polymorphonuclear, 90 per cent; small lymphocytes, 10 per cent.

Urine: Acid in reaction. Specific gravity 1.015. Albumin 1 plus. Sugar, negative. Casts, few hyaline. Occasional pus and red blood cell.

In spite of the multiplicity of findings the patient's general condition was thought good enough to withstand operative interference.

As soon as a diagnosis of meningitis was made from the findings of the physical examination, a spinal puncture was done in the usual manner. The fluid was found to be under slightly increased pressure. It was turbid. At the time of this initial puncture 25 cubic centimeters were withdrawn and 15 cubic centimeters of antimeningococcic serum introduced slowly into the spine. An immediate cell count and smears were made and stained by the usual Gram method. The cell count was found to be 4,160, practically all polymorphonuclear leukocytes. In the smears obtained at this time numerous Gram-negative diplococci were found both intra- and extracellular. These were identified as the diplococcus meningitis.

The patient was then taken to the operating room and the cervix dilated and gross pieces of tissue removed, with a production also of a foul purulent discharge. No attempt at curettage was done and an iodoform gauze pack was inserted.

That same night our diagnosis, having been established after desensitization by 0.2 cubic centimeter doses intradermally and two 2 cubic centimeter doses intramuscularly, 15 cubic centimeters of antimeningococcic serum were given intravenously, and 1,000 cubic centimeters of a 10 per cent glucose solution in sterile water was given intravenously.

The next morning a spinal puncture was done again and 45 c.c. of turbid fluid was withdrawn, samples of which were sent to the laboratory for a cell count, and two drops were collected on culture media. Thirty c.c. of serum were given intraspinally at this time.

The report from the laboratory on this material was a cell count of 5,100, mostly polymorphonuclear leukocytes. The following day the culture of spinal fluid showed a pure strain of meningococcus. On the same day a blood culture was taken which showed a pure strain of meningococcus; no other septic organism was present other than the meningococcus.

At this point all concerned became very interested. We began to wonder if it were not possible that the infecting organism causing the septic abortion could possibly be the meningococcus. A consultation of

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members of the staff was held as to the advisability of taking cervical smears at this time. It was decided that as long as we had still some hope of her recovery we should not do so at that time. Orders were sent, however, to the pathology department to take special care in the examination of the placental fragments removed at the dilatation and curettage for the presence of organisms.

That same afternoon the patient showed signs of increased pressure again, namely, slowing of pulse, which became of the strong bounding type. A tap was repeated at this time for drainage and 25 c.c. of fluid removed. Again that night the tap was repeated and 20 c.c. removed and 15 c.c. of serum given into the spine and 1,000 c.c. of 10 per cent glucose in sterile water intravenously.

On the morning of the second day a spinal puncture was performed and the fluid was found to be only under slight pressure, but was still very turbid; 20 c.c. were removed and 15 c.c. of serum given. It was decided, since the patient still showed symptoms of increased pressure after this tap, that we possibly had some form of blockage. Accordingly that afternoon a cistern puncture was done and 30 c.c. of turbid fluid under quite marked pressure obtained; 15 c.c. of serum was slowly introduced directly into the cistern.

That evening 15 c.c. of serum was placed in 1,000 c.c. of 10 per cent glucose in sterile water and given intravenously. The patient showed no marked improvement and expired at 2:30 a. m. on the morning of the third day.

Immediately after pronouncing the patient dead a vaginal speculum was introduced and three smears taken from the cervix, which were sent to the laboratory for examination. These all three showed numerous Gram-negative bacilli and more numerous yet Gram-negative diplococci, identified as the meningococcus. No streptococcus, no staphylococcus were found.

On the second day of the illness, a second blood culture was taken to check on the first. This likewise showed a pure growth of the diplococcus meningitis.

The report from the pathological department on the tissue removed at the dilatation was, that the tissue was placental in character. No organisms were demonstrated by the usual methods in the tissue.

CONCLUSIONS

1. We have a case of abortion (probably induced) taking place on January 7, 1932. On January 8, the patient had a severe chill and expelled the fetus on January 9, followed the next day with fever, headache and chills. Undoubtedly a true septic abortion.

2. On January 11, we have the patient admitted to the hospital with definite symptoms of a meningitis, proven by clinical and laboratory means to be of the epidemic form.

3. We have two blood cultures taken during the illness showing a pure growth of meningococcus.

4. We have cervical smears, showing meningococcus as the only septic organism present in that location.

We, the writers of this report, do not claim that we have positive proof that the entrance of the organism, the meningococcus, was by way of the cervix through the abortion with the meningitis showing up secondary, but we do feel it to be a very probable conclusion. We considered the case a very interesting and speculative one and offer it for that reason.

A PLEA FOR THE PRELIMINARY IRIDECTOMY

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It is generally conceded that the preliminary iridectomy before a cataract operation has certain outstanding advantages that should make a strong appeal to the younger surgeon or to those of more limited experience even if they are older.

The more experienced surgeons may be trusted to work out their own salvation along a line of technic that will best answer their purpose. And yet, most of our more experienced men readily admit its advantages and only fail to practise it for reasons of expediency, but not for reasons of better judgment. Practically every one will admit if he were to have an operation on his own eye he would prefer to have the preliminary iridectomy performed about four or six weeks preceding the regular cataract operation.

The chief disadvantages of having two operations at two separate settings instead of the combined single operation are two: viz., the element of time and the increased menace of infection from two exposures to this danger. On the other hand, the advantages are so well accepted as to deserve utmost serious consideration even by our

more competent men. These advantages may be briefly comprehended under six main heads:

- I. The preliminary iridectomy gives the surgeon a perfect index of the patient's reactions to surgery on the eye.

- a. Psychically: Surgeons will ascertain whether or not the patient is controllable, temperamental, nervous or fidgety.

- b. Whether there is hypersensitivity to trauma or infection and whether the

recovery is uneventful or delayed by pains and excessive reactions.

II. It stimulates the patient's faith in his surgeon and confidence in himself. If the preliminary operation is painless and readily recovered from, he will welcome the second one instead of anticipating it with a fearful dread that in some cases approximates a serious shock.

III. It wonderfully simplifies and shortens the second operation and surgeons can do better work.

IV. If there is any hidden tendency to glaucoma, excessive hemorrhage or other complications, it will most likely manifest itself at the time of the first operation.

V. There is less danger of iris inclusion in the corneal wound.

VI. Generally the only hemorrhage

present in an ordinary cataract operation is from the iridectomy. The elimination of this by means of the first operation is exceedingly helpful in maintaining a clear unobstructed field during the subsequent operation.

VII. The final visual results are slightly better by this technic.

With the advantages so overwhelmingly in favor of the preliminary iridectomy, it is hard to understand why it has not been more generally adopted. It is fairly certain that if the advantages of the double operation were properly explained to the patient practically everyone would prefer it. The inconvenience of two operations is not to be compared with its increased safety, ease of technic and improvement of vision.

420 MEDICAL ARTS BUILDING

A DISLOCATION OF THE CARPAL BONES—THE SCAPHOID AND SEMILUNAR: REPORT OF A CASE

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(Roentgen Ray Interpretation by A. W. CRANE, M.D., Kalamazoo, Michigan)

In reporting this case, I was impressed by the rarity of the occurrence and the scarcity of literature, especially the treatment and manner of reduction, of these dislocations. Also the ease in which they may be overlooked in the study of the roentgen ray when films taken in the anterior-posterior plane, stress one to insist upon a lateral-ventral view of injuries to the wrist joint.

Reduction of a dislocated lunate bone may often be accomplished immediately, or within a few days, by manipulation. If the patient is seen immediately after the accident, attempts should be made by manipulation to reduce the dislocation, which may be successful. Forced hyperextension of the wrist opens the space between the capitate and the radius; pressure is then made upon the anterior fulcrum, as a broomstick or a padded wedge-shaped block, over which the wrist is hyperflexed. In a majority of cases, the lunate may be forced back into position. A Thomas wrench may be employed for the purpose, one rod of the wrench over the lower extremity of the dorsum of the radius and ulna and the other over the displaced lunate bone; pressure is made in hyperextension and then the wrist is flexed with the pressure continued.

Jones has described a method for manipulative reduction by pressing on the upper edge of the dislocated lunate bone with the thumb of one hand, while the wrist is dorsiflexed and strongly extended by the sur-

geon's other hand. The wrist is gradually palmar flexed and the capitate is manipulated around the upper edge of the lunate. Care must be taken in such measures not to employ too much force, as there is danger of injury to other bones of the carpus with subsequent osteoporosis, or the median nerve may be traumatized. After reduction is accomplished, as demonstrated by the roentgen ray, a simple cock-up splint is applied, as there is no disposition to redislocation. Many surgeons prefer open operation, at which time either reduction or excision of the bone may be performed. On account of a possible subsequent traumatic arthritis or osteoporosis, many surgeons prefer excision in all cases. The author believes that the bone should be reduced in all cases in which there is sufficient ligamentous attachment to permit normal circulation. In

those in whom the lunate is practically separated, it is better to remove the bone, for a new circulation may not be established until there has been such organic change as to induce persistent disability with pain.

Surgical reduction is accomplished through an anterior incision in the midline.



Fig. 1. Showing normal relations of carpal bones.

The tendons of the flexor carpi radialis and the palmaris longus muscles are separated. The median nerve must be isolated and retracted inward; it is about the size of the largest tendon at the wrist, for which it might easily be mistaken. The lunate is prominent when dislocated and the dissection should be carried close to the bone. The lunate is levered into its normal position between the triquetrum and the navicular, after the former bed has been cleaned out and the wrist hyperextended. The lunate may be pressed into its normal position, or a special bone skid described by Speed may be employed. In those in whom there has been an elapse of two weeks or more, reduction has been accomplished with restoration of good function, but undoubtedly in such cases the best course to pursue is excision. The bone is grasped by a pair of rat-toothed forceps, dissected free of all adhesions, and removed. A few deep stitches close in the space occupied by the

bone and the skin is closed. Pain is usually relieved and function improved materially, after excision. Almost normal function is regained in many instances while in others there may be more or less permanent disability. Much depends upon the degree of tenosynovitis, nerve injury and osteoporosis. When reduction is performed soon after the injury, either by closed manipulation or open operation, the results are good. In cases of long standing, the lunate should always be excised, as the functional results following excision are usually excellent.

Posterior Dislocation of the Lunate Bone.—Dorsal dislocation of the lunate (semilunar) bone may occur alone or associated with forward dislocation of the radiocarpal joint. It is exceedingly rare. The displacement is produced by forced hyperflexion of the wrist, with ulnar deviation of the hand. The symptoms are similar to those of anterior dislocation, but there is an enlargement visible upon the dorsum of the hand, if this is not obscured by swelling. The displacement may be suspected from inspection and palpation, but the diagnosis must be confirmed by the roentgen ray. Manual reduction is accomplished by manipulations, the reverse of those employed for anterior dislocations. If reduction can not be accomplished manually, surgical replacement is indicated through a dorsal incision.

Dislocation of the Navicular Bone.—Dislocation of the carpal navicular (scaphoid) bone is exceedingly rare and when present is usually backward. Recent dislocations may be reduced by direct pressure; if this is not successful, the bone should be excised. When the dislocation is of long standing the bone should always be excised.

CASE REPORT

Mr. J. D. C., traveling salesman, aged 38 years, complained of pain in the wrist joint and a sense of numbness of thumb, first and second fingers in the right hand.

The father and mother both died of tuberculosis at ages of 25 and 27. No brothers or sisters.

The patient was first seen at the home of his friends on the sixth of November. He stated he had been in an auto accident on October 30. His car was sideswiped by another car and turned over several times. He was thrown clear of the car and was unable to state the position in which he landed. He was not knocked unconscious. This occurred about 7:30 P. M. He was taken about twenty miles to a hospital where he received medical attention. Fifteen X-ray views were taken of various parts of the body and he was informed he had a fracture of both bones of the arm and three ribs cracked as well as numerous body bruises. The arm was placed in a plaster-of-Paris cast after reduction of fractures

under anesthesia. Adhesive tape supported ribs and pelvis. He remained in the hospital for two or three days, then at his request he was allowed to go to a hotel where he stayed for two days. He was then taken to a nearby town in an automobile, placed upon a train on which he arrived in this city the following evening. He was first seen at noon on the seventh day after the accident. His complaint has been noted above and it may also be added that he was pacing the floor from pain and nervousness

manually but an open operation would be done if this were not successful. Monday morning he was taken to the hospital, prepared for operation and lying on the X-ray table was administered gas anesthesia and the reduction attempted successfully. The maneuver was as follows: The forearm was grasped by an assistant. The hand was grasped as in shaking hands and a strong direct pull was exerted. The hand was then adducted and then sharply supinated, all the time exerting a strong



Fig. 2. Radiograph showing dislocation of scaphoid and semilunar bones, postero-anterior position.

and he said he had been unable to sleep the night before because of pain. He also stated his hand felt cold. The plaster-of-Paris cast extended from about four inches above the elbow to the middle of the fingers. The cast was split at the points which might have exerted pressure on the arm and hand and he stated it relieved him some. He was given a sleeping potion and asked to return the following day, which he did. He complained bitterly of the pain in his wrist joint and was advised to have the joint X-rayed. This was done and the dislocation was discovered.

X-RAY EXAMINATION (11-7-31)

Arm, elbow and wrist: Films were made of the arm, including the elbow and wrist joints, in the antero-posterior and lateral positions, with the cast in place excepting that the elbow was not obtained in the antero-posterior position.

We observe an impacted fracture at the head of the radius.

At the wrist there is a dislocation of the scaphoid and semilunar. The semilunar was displaced ventrally.

Four plates were taken at this time but as this was Saturday afternoon, the patient asked to be allowed to wait until Monday morning to have the reduction made. This was agreed upon and he was informed of his condition. He was advised that an attempt would be made to reduce the dislocation



Fig. 3. Showing dislocation, lateral position.

direct pull in the angle in which the hand was carried. Pressure was exerted upon the carpal bones by the thumb of the left hand. The scaphoid was felt to go back with a sharp snap but it was necessary to repeat this maneuver to reduce the semilunar, which also snapped into position. The hand was X-rayed and the bones found to be in perfect alignment although an unusual space remained between the semilunar and scaphoid. The forearm and hand were placed in a moulded metal splint which extended beyond the finger tips and the arm carried in a sling.

The patient had considerable pain in the wrist joint for two days and then splint was removed and diathermy treatment daily for four days. He was then allowed to return to his home feeling very much improved with no apparent deformity of the wrist joint.

REFERENCE

Lewis, Dean: Practice of Surgery.

NEUROLOGIC AND PSYCHOPATHIC MANIFESTATIONS OF PERNICIOUS ANEMIA*

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It is a pleasure to discuss or perhaps rather to speculate on the cord lesions that accompany pernicious anemia. The clinical diagnosis is often first suspected from the neurological symptoms, and secondly the relations of these to the blood changes though very speculative intrigue any biological interest.

According to Woltman¹ the disease is accompanied by neurological symptoms in from 50 to 80 per cent of cases, 30 per cent being neuritis and the remaining 50 per cent serious cord lesions. Interest in the latter arises from the great regularity with which two bilateral systems, judging at least clinically, are nearly exclusively involved. Predominantly the posterior tracts of a Goll and Burdach with the crossed pyramidal tracts in the lateral column undergo a progressive degeneration, and, leaving aside objections to be raised later, the clinical symptoms correspond well enough to such lesions. From the columns of Goll and Burdach we expect such ataxia as is seen in tabes; from the crossed pyramidal tracts the spasticity that occurs in a much rarer disease, lateral sclerosis. Clinically in pernicious anemia we see a neurological syndrome which combines the two and we teach our students to search further for pernicious anemia when they encounter a spastic ataxia. It is generally admitted that in one case the ataxic symptoms may mask their spastic opponents or vice versa, and Oppenheim² says that post-mortems explain the predominance by degeneration in the posterior columns outrunning that of the anterior or in reversal of that order. Thus is summed up the bare bones of our knowledge of the neurological lesions of pernicious anemia and from this point on we may justly proceed to study exceptions to the clinical picture, relation of pathology to symptomatology, and theorize about etiology.

Clinically the disease not infrequently begins as far as the patient has knowledge with paresthesias in fingers or toes. This fits well with Woltman's findings of 30 per cent showing neuritis, but not infrequently the first symptom is clumsiness in the finer

movements of the fingers, buttoning, sewing, piano playing, or perhaps less frequently staggering due to ataxia in the legs or stiffness from spasticity. It is of great clinical importance that these subjective symptoms confirmed by objective findings such as finger-nose, heel-knee ataxia, exaggerated tendon reflexes and Babinski sign or some of its modifications precede by long periods the characteristic microscopic blood changes. On more than one occasion in our service in the Cincinnati General Hospital we have predicted from cord symptoms the onset of pernicious anemia at a time the blood picture was utterly normal. The admission must be made that this preceded the days when the crucial importance of achlorhydria was known. No doubt a gastric analysis would have made the prediction much less of a prophecy.

The literature shows some cases where a limitation of the disease process to a restricted level of the cord has produced a picture close to myelitis, but these are rare. Girdling sensations are not uncommon, but not accompanied by such severe pains as accompany tabes. Argyll-Robertson pupil has been reported, though very rarely, and justifies the postulation of coincident cerebro-spinal syphilis and P. A. Neither disease guarantees freedom from the other. Unscrambling such combinations need not keep the clinician awake at night.

When pernicious anemia is first diagnosed by the neurologist, he usually encounters a patient whose history is of tingling in the fingers or toes followed by ataxia as shown objectively in clumsiness of the fingers or ataxic gait, and the blood picture of frank or suspicious achlorhydria is present with rare exceptions. Lately, loss of vibration sense in the bones has been given great

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diagnostic importance. Loss of such sensation in the sacrum has been said to have great weight, but it is present in tabes by admission, and I believe as a result of 75 examinations with a tuning fork of standardized vibration that the importance of sacral vibratory loss is over-rated. I have seen an isolated loss of vibratory sense there in three cases of unquestionable neurosis and one of feeble-mindedness. Pernicious anemia patients quite regularly show loss of vibration sense in the sacrum and lower bones, but there is nothing pathognomonic in the formula. Position sense of the fingers and toes is usually impaired, the tendon jerks are exaggerated, and Babinski's or other signs present.

I have twice seen pernicious anemia develop in patients diagnosed as neurotic. The one had a history of violet temper and financial extravagance that brought a complacent husband almost to ruin. She fell into the hands of Minot, who found achlorhydria in her and a son. In spite of the skepticism of myself and a professor of medicine, she ultimately ran the typical course and died. The second, a woman of life-long hypochondriacal complaining, unexpectedly had her legs give way on an unfinished road-bed of broken rock. In view of the previous history, her subsequent complaints were ascribed to a traumatic neurosis. Quite suddenly she developed the clinical picture of pernicious anemia and subsequently died.

Considering the enormous number of whining, extravagant, and bad tempered women one encounters clinically I can only conclude that the pernicious anemia was a coincidence in both cases and no neurotic symptoms attachable to pernicious anemia can be postulated. Also there is no psychosis pathognomonic of the disease. Davidson and Gulland³ report two patients in each of whom exacerbation of pernicious anemia was preceded by psychotic episodes. From the literature they conclude that no characteristic psychosis accompanies pernicious anemia.

Pathological examination of nerve tissue from cases of pernicious anemia roughly coincide with the clinical symptoms, but give rise to several clinical-pathological contradictions. Largely, we find degeneration of the columns of Goll and Burdach and the pyramidal tracts, but some anomalies appear. One must trace a degenerated tract

to its cells of origin to find the most likely source of the trouble. For the pyramidal tracts these would be the Betz cells in the cortex and cytological examination shows them to our great satisfaction in a state of degeneration. Likewise the cells of Clarke's column in the spinal cord are atrophic and the cerebellar tracts to which they give rise sclerotic so that ataxia is well explained. On the other hand the columns of Goll and Burdach are quite regularly involved (Adami,⁴ Collier⁵) but there is not, as in tabes, any lesion of the sensory radicles as they enter the cord in spite of similar radicular pains and constricting paresthesias, and further the cells in the sensory ganglia giving rise to the tracts in question are unaffected. Correlation of symptomatology and pathology in pernicious anemia is in much the same boat as in disseminated sclerosis. In that disease, pathology is found without symptomatology and vice versa: Spasticity without lesion of the pyramidal tracts, lesions of the pyramidal tracts without history of spasticity ante-mortem. The only definite correlation found is disseminated lesions with disseminated symptomatology. One can say of pernicious anemia that spastic ataxia is usually present ante-mortem and degeneration of the posterior and lateral columns post-mortem.

Some further pathological observations need to be added. Myelitic degeneration precedes axonal. The degeneration begins in the center of the affected tracts and spreads outwardly. The process begins in the dorsal portion and spreads up and down, sometimes as far as the internal capsule. The cord is edematous, not shrunken. Davidson and Gulland³ regard the tract degeneration as primary and atrophy of Betz and Clarke's column cells as secondary. Karsner⁶ reports slight atrophy in the fronto-parietal lobe. Davidson⁷ saw no difference in treated and untreated except slight glial response.

Speculation on the relation of the anemia to the cord change raises some interesting points. The first is whether the anemia is their direct cause. In favor of this opinion is the occurrence of the combined systemic cord syndrome in the anemia of other diseases. Profound secondary anemias sometimes cause it. I have seen one case with gastric and one with uterine cancer and the literature contains many such instances. The validity of the argument is attacked by the supposition that toxins of the malignant

growth cause both anemia and cord changes. Furthermore, experimental anemia fails to produce in animals the expected cord changes. Hemolytic toxins, B. Welchii, phenylhydrazine and hemolytic sera have failed to affect the cord. Another fact against this theory is the failure of cord changes to remit with the blood picture. Just before the day of liver therapy the Cincinnati General Hospital was equipped with a department of heliotherapy for treatment of tuberculosis and many cases of pernicious anemia were also subjected to months of light exposure. Lasting remissions or perhaps cures of the blood picture were produced without affecting the cord symptoms except in one case.⁸ The duration of the anemia must be considered in evaluation of this argument. The blood system is capable of extended regeneration, the nervous system of very little and stands continued injury very badly. Possibly earlier treatment of the anemia would have saved the cord before irreparable damage was done, but no such correlation appears in the series treated by heliotherapy.

Against anemia being the direct cause of cord changes is also their frequent appearance before the anemia and the occurrence of the combined systemic syndrome in cases not showing anemia of any kind. Such instances no doubt are rare, but unknown causes produce the syndrome and Oppenheim reports one case in paresis and quotes Zahn's cases of familial combined systemic sclerosis.

The postulate that a common toxin causes the blood, cord, and gastric changes can be best defended. Gulland presumes that some patients have a susceptible nervous system which shows changes before the toxin has done enough liver damage to evoke the megaloblastic response of bone marrow. This hereditary predisposition seems less of a *deus ex machina* when we remember that a gastric predisposition is well substantiated. Blood relatives of the patients have again and again shown achlorhydria. This also explains the failure of cord symptoms to remit with the blood, for one can postulate that the pressure of the toxin is enough relieved to make the megaloblastic response unnecessary, but not enough to spare the nervous tissues. This also explains cases of combined systemic sclerosis with anemia at any stage. The toxin never becomes vir-

ulent enough to affect anything but the susceptible nervous system.

Gulland feels that the postponement of death from anemia by liver therapy has already demonstrated the susceptibility of the nervous system and that we will see a higher proportion of cord involvement than before.

With the advent of something deserving the name of a cure for pernicious anemia, the neurologist would predict remission of the cord symptoms to depend on the length of their existence before the initiation of therapy, but reports of the efficacy of liver in giving such relief are contradictory.

Minot, Murphy, and Cornell saw little result, but Ungley and Suzmann⁹ report eight cases back at work of thirty who entered hospital, bed-ridden. Starr¹⁰ reports eight cases without any improvement in cord symptoms. Richardson¹¹ saw four cases of moderate and eight of complete clinical improvement out of fourteen showing ataxia. In his whole series, sixty-seven cases, he has never seen ataxia develop in the face of treatment. (Length of observation, 6 to 24 months and up.) Krause¹² reports all of four cases progressing to paralysis in spite of improved blood picture. Curschman¹³ reports two with the same result.

Ungley and Suzmann¹⁴ present a later report. Of 30 cases treated with liver, 17 have improved, 8 are stationary or worse, and 5 died; of 31 in whom liver was not used, none improved, 3 were stationary or worse, and 28 died. They have not analyzed for correlation between duration before treatment and therapeutic result, but conclude that insufficient liver administration is demonstrable in the unimproved cases. That delay in commencing liver therapy permits irreversible changes to establish in the spinal cord seems a defenceless postulate in the face of the frequency with which combined systemic sclerosis has begun and progressed after the initiation of liver therapy in adequate amounts. Ungley and Suzmann think that the amount of liver necessary to bring the blood picture to normal is not enough to spare the nervous system which would require the continuance of full doses of liver after improvement in the blood picture.

My own experience with cases is as follows:

Case 1.—A female (Mrs. S.), of fifty, suffered from gastric upsets for twenty years and in March,

1930, began to notice disturbance of gait. She was treated for change of life for six months, and when brought to the office was too ataxic to walk unaided. The clinical picture was typical in every way. She had two months bed rest with ventriculin and dilute hydrochloric acid. The blood and nervous systems improved *pari passu* and since February, 1931, she has been coming to the office in a street car, unaided. At the present time a slightly broad-based gait and station is the only remnant of her ataxia.

Case 2.—Lily S., aged forty years, had suffered from "acid mouth" and raw tongue for more years than she can estimate. On January 19, 1929, following extraction of some teeth, she suffered from what was probably an hysterical interlude rather than truly organic nervous symptoms, for she had a feeling of great weight placed upon her and terrible mental agony and thought her bones were splintered and coming through the flesh. There were also episodes of tightness in the throat and with difficult breathing (globus hystericus or laryngeal crisis). She was not up and around until May of that year and then noticed difficulty in walking. It was two years later that I first saw her; the ataxia was extreme. She walked with the aid of the furniture and came downstairs backwards, holding to the railing. Blood and spinal fluid were negative for lues and the clinical and laboratory examinations typical for pernicious anemia. With ventriculin the blood picture has come to normal (September, 1931), but the ataxia is so slightly improved as to be negligible.

Case 3.—Mrs. L. B. S. This is perhaps the most interesting case. In 1918, the patient had a so-called "break-down" and could not walk. When seen in 1924, she presented the typical picture of combined systemic sclerosis with pernicious anemia. For four years her cord symptoms aggravated very slowly and the blood count got below four million only once. In 1928, she began to eat raw liver and had a lasting remission of her neurological symptoms that leaves her with only a slight ataxia.

The following conclusions seem justified: The cord symptoms are the result of a di-

rectly acting toxin rather than the anemia. Admitting exceptions, the Betz cells and their axones in the pyramidal tracts, the cells of Clarke's column and their axones in the cerebellar tracts, and the columns of Goll and Burdach (without involvement of their cells of origin in the dorsal nuclei) are habitually degenerated. The selectivity for these systems remains unexplained. Treatment with liver extract frequently relieves these symptoms, but often does not. That a dose sufficient to relieve the megaloblastic response can be too little for the cord symptoms, is a valuable postulate.

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MYASTHENIA GRAVIS FOLLOWING ELECTRICAL SHOCK*

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ANN ARBOR, MICHIGAN

Myasthenia gravis, first described by Wilkes in 1877, is a disease characterized by muscular exhaustion. The affected muscles are weak and easily fatigued. Neither age nor sex has any bearing on the disease. The face is often expressionless, the eyelids droop, and there results a "sleepy" appearance. Complete rest frequently fails to restore normal muscle tonicity. The case herewith reported is of special interest because of the mode of onset as well as the prognosis and treatment.

M. B., a female, sixteen years of age, was admitted to the neurological service of the University Hospital on April 1, 1931. She complained of weakness, difficulty in talking and swallowing, headache, and gastric distress. The illness is said to have dated from the previous autumn. At that time she was clerking in a store and had accidentally received

a rather severe electrical shock. She took hold of two conductors that were carrying an electric light current of 110 volts and was unable to release her grasp. She continued to receive the current for some minutes before it could be turned off. Ever since this accident, she had been weak, nervous, and after slight exertion fatigued easily. Just prior to admission, liquids had a tendency to regurgitate through the nose, and it was difficult for her to hold her mouth closed. These symptoms were made worse if she continued eating. She was unable to walk more than two blocks because of progressive weakness. In raising the arms over her head to

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comb her hair, they would tire quickly. First, the right eyelid drooped and later the left, so at times the eyes were closed completely.

During childhood, the patient had diphtheria, scarlet fever, mumps, whooping cough, and in 1929, smallpox. The family history was irrelevant.



Fig.1. Bilateral ptosis with expressionless, apathetic face.

On examination, the patient's gait was not impaired. She was well-nourished and not acutely ill. She replied promptly to questions and was normal mentally. There were no localized atrophies or deformities. The voice, which had a marked nasal tone, became aphonic after talking for a short period of time. There was bilateral ptosis, which was more marked on the right side than the left. The face was expressionless and apathetic (Fig. 1). The pupils were equal and reacted to light and in accommodation. The extraocular movements were normal and there was no nystagmus. There were no cranial nerve palsies; however, the masseter muscles failed to respond after ten contractions. The deep tendon reflexes were brisk, equal, and did not fatigue. There was no impairment of sensation. The heart was not enlarged, the rate was regular, there were no murmurs, and the sounds were of good quality. The blood pressure was 122/80. The electrocardiogram demonstrated marked sinus tachycardia. The temperature was 98.6° F., pulse 120, and respirations 20. The urine was acid in reaction, the specific gravity was 1.020, and tests for sugar and albumin gave negative results. The sediment contained 10-15 pus cells and no casts or red cells. The Kahn reaction on the blood was negative. Peripheral examination of the blood showed hemoglobin, 85%; red cells, 5,250,000; and white cells, 7,100. The blood non-protein nitrogen was 32.5 mgms. per 100 c.c.; the sugar was 83 mgms. per 100 c.c.; the creatine 4.5 mgms. per 100 c.c., and creatinine 1.6 mgms. per 100 c.c.

Roentgenological studies of the gastro-intestinal tract and chest showed neither evidence of organic disease nor the presence of a persistent thymus.

Following bed rest and oral administration of $\frac{3}{4}$ grains of ephedrin sulphate three times a day

the heart rate was decreased, although the electrocardiogram still demonstrated a sinus tachycardia. The patient became asymptomatic and was discharged from the hospital. Within a month, the symptoms returned, the remission having lasted for three weeks. Later, when the patient's condition was considerably worse, she was in an auto accident, following which she became asymptomatic for a period, only to have another relapse.

In September, 1931, upon seeing the patient, it was found that her condition was worse, in that there was a marked loss of weight in addition to her previous symptoms. This probably was due to anxiety as well as her inability to take nourishment.

Various therapeutic agents have been tried, including ephedrin sulphate, arsenic, strychnine, thyroid, etc., but the best results were found after complete rest and prevention of fatigue.

DISCUSSION

Myasthenia gravis is characterized by muscular weakness without paresis or true paralysis. The affected muscles become readily fatigued and weak, the weakness frequently persisting after complete rest. The face often is expressionless with drooping eyelids and a "sleepy" appearance. In speaking, the voice gradually becomes nasal and indistinct. Remissions frequently occur. In this case, the muscles of mastication, deglutition, speech, levator palpalabrae and orbicularis oculi were chiefly involved.

It is necessary to take into consideration a number of conditions in diagnosing a case with these symptoms. Post-diphtheritic palsy and pseudo-bulbar palsy are readily excluded by the history, and the same is true of so-called apoplectic bulbar palsy. The muscular dystrophies and atrophies give a somewhat similar appearance to the face but they do not cause difficulty in swallowing or a rapid recuperation of muscle weakness after a short period of rest. Syringobulbia and brain tumor pressing on the medulla oblongata might give rise to the bulbar symptoms, but the other signs of these affections are absent. Syphilitic disease of the brain might be thought of but there are no signs of syphilis. Chronic polioencephalomyelitis may be difficult to differentiate, but there was no atrophy of the muscles involved and remissions were present.

The etiology of the disease is a matter of speculation. Buzzard found what he called "lymphorrhages" in the skeletal muscles and in other organs. Keschner and Strauss believe that in 50 per cent of the cases these are found. It is thought that auto-toxemias in certain types of constitutions, chronic infections, tumor, toxins, or persistent thymus may be the cause of the disease. Some cases have followed encephalitis.

The most important therapeutic agents in the treatment of myasthenia gravis are complete rest and removal of focal infections. When there is difficulty in deglutition, the patient should be spoon or tube fed. Rectal or intravenous administration of glucose may be advisable. Ephedrin sulphate ($\frac{3}{8}$ to $\frac{3}{4}$ grains) three times a day has given some relief of symptoms. Strychnine, arsenic, thyroid and other glandular extracts have all been used with varied results. The disease is characterized by spontaneous remissions, which may explain the variations observed.

The prognosis is grave. Rarely is there a complete recovery. Patients affected by this disease seldom live many years. Dr. C. D. Camp has had a case under observation for sixteen years. This, however, is extra-

ordinary. Various therapeutic agents have been used, but the most infallible remedy during relapses has proven to be rest.

CONCLUSION

Apparently, the onset of the condition followed an electrical shock, yet this may have been only a coincidental factor. The chief therapeutic agent is the avoidance of fatigue and anxiety with the infallible remedy of complete rest during relapses. The prognosis of myasthenia gravis is grave, yet with proper surveillance some cases live many years.

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THE DOCTOR'S LOG

WILLIAM J. STAPLETON, JR., M.D.

DETROIT, MICHIGAN

MAPS

Colored maps upon the wall
Do not mean a thing at all
To those who see but charted spaces,
Separating lands and races.

But maps to him who is traveling far
From homeland hearth to alien star,
Flash back a thousand storied gleams
Of desert, jungles, peaks, and streams.

For never a traveler's heart but flames
To read a map's enchanting names;
To him who's circled land and sea,
Maps are wings of wizardry.

—M. A. Beer in *Evening Post*, New York.

Last year, the first in ten, we did not go abroad, but decided to motor about our own country; we took our vacation in sections. A trip to Baltimore came first; then through our own State of Michigan, named by the Indians "Mich-sang-ye-gan," meaning "the Lake Country"; and lastly to the fascinating old Island of Nantucket.

The American College of Physicians had their last meeting at Baltimore, an ideal place for scientific gatherings. The very sight of Johns Hopkins recalls memories of the great men who made Baltimore famous all over the medical world. Named after Lord Baltimore, the city has a long and honorable history. My interest lies in books and medical history, so as soon as possible I vis-

ited the Welch Medical Library, the bearer of a message from Professor Karl Sudhoff of Leipsig to Professor Welch. I was most kindly received, and personally guided through this wonderful library and Institute of Medical History. Colonel Fielding Garrison, whom I had wished to meet for years, is now the librarian of the William Welch Library and lectures to the students of Johns Hopkins on Medical History. He is the author of the well known "History of Medicine" which is recommended as the best book in English on the subject. Another charming man connected with the Institute is John Rathbone, M.D., Ph.D., who is an authority on Medical History. We listened to very enjoyable talks by Doctors Welch, Garrison and Oliver. In the Great Hall of the Welch Medical Library is hung the famous painting by Sargent of "The Four Doctors"—Kelly, Welch, who still live; Osler and Halstead, who have passed to their reward. No doctor can think of Johns Hopkins without recalling these men and it is fitting to have their pictures enshrined in this beautiful building dedicated to books. One of my greatest pleasures in Baltimore was to hear Doctor Welch read aloud the words from Milton which are over the fireplace,

Our books are not absolutely dead things
 But do contain a potency of life
 In them to be as active as that soul was
 Whose progeny they are
 Now they do preserve
 As in a vial
 The purest efficacy
 And extraction of that living Intellect
 That bred them."

I returned again and again to the library to wander about. It is the only Medical Institute of its kind in the United States, a great monument to the man who made it possible, a man beloved by all who knew him, Dr. William Welch. A fine autographed etching hangs in my den and I shall always prize it highly. Johns Hopkins with its great collection of buildings and its old red front is a familiar sight to every medical visitor. In my mind's eye, I see the statue of "The Great Physician" standing with outstretched arms, and with the expression in his face which says, "Come unto me all ye that are heavy laden."

Edgar Allen Poe, that genius of American poetry, is buried in Westminster churchyard. It was here, while watching the night bombardment of Fort McHenry during the war of 1812 that Francis Scott Key wrote the national anthem—The Star Spangled Banner.

More than half the population of Maryland lives in Baltimore. It is unique in its blocks of red brick houses and white marble steps. We never go to Baltimore without paying a visit to the famous old Lexington Market, which takes up several city blocks.

Historic Mackinac Island, the objective of our Michigan tour, possesses a shrine for all doctors, for it was here in the old Fort Michilimackinac that William Beaumont, the army surgeon, was able through his experiments on Alex St. Martin to make his great discoveries in the physiology of digestion. I will not try to tell the story here for it is much better written in a little book by my good friend Dr. J. H. Dempster (the editor of the MICHIGAN STATE MEDICAL JOURNAL), entitled "Pathfinders of Physiology." Another illuminating article on Beaumont is the radio talk given by Dr. Haggard. The Michigan State Medical Society has placed a boulder in the grounds of the Fort with an inscription stating that near this point William Beaumont carried out his experiments. The face of this monument was replaced a few years ago by a bronze tablet bearing the same inscription.

On our way again and this time to Nantucket. We went by way of Niagara Falls on the Canadian side, through Brantford, where the telephone was born, and where one may see the home of Bell, the inventor. Our next pause was at Rochester to see the new University and Medical School. Besides being the home of the kodak, Rochester is a beautiful city. Central New York is intensely interesting historically, especially for its Indian legends. We crossed the Hudson at Albany, through the beautiful towns of Lennox and Stockbridge, and followed the Mohawk Trail to Waterbury. We followed the Connecticut valley to Providence and New Bedford, where one should visit the finest whaling museum in the United States. We drove around and up along Buzzards Bay, which recalls many memories of Cleveland and Roosevelt, and night brought us to Woods Hole.

In the elbow of Cape Cod nestles the former whaling village where science now delves into the secrets of marine life, and it is here many mysteries are solved. Here Jacques Loeb made his startling discoveries regarding the living cell. T. H. Morgan and his pupils traced the clues of heredity and made other important contributions. Conklin of Princeton, Jennings of Johns Hopkins, the Lille Brothers of Chicago, Osterhout of the Rockefeller Institute, Parker of Harvard, E. B. Wilson of Columbia, and Woodruff of Yale are some of the men, leaders in American biology, who have made of Woods Hole a mecca in the summer time for the scientific worker. The story of Woods Hole dates back to 1871, when Spencer F. Baird, secretary of the Smithsonian Institution, arrived there on a scientific mission. He was looking for a suitable spot to study North American fish. For ten years he stayed at Woods Hole, building a permanent laboratory and hatchery and later a dormitory.

Associated with Woods Hole is the name of the greatest of American teachers, Professor Louis Agassiz of Harvard, who was preparing to study life here. A tiny island called Penikese in Buzzards Bay was given him, and here in 1873 Agassiz established a summer school of natural history. Whittier's poem, "The Prayer of Agassiz" gives an account of the opening of the school and starting the courses while the carpenters were still at work. Agassiz died the following year and his son tried to carry on the

work, but the difficulties on this little island were too great. The first school was disbanded but the students in the first class—W. K. Brook, Alpheus Hyatt, David Starr Jordan, Charles Sedwich Minot and others—would not rest until another place was found. The result was the founding of the Marine laboratory at Woods Hole in 1888. This location was selected because of the fishermen's station and its desirability for the study of marine biology. Instead of the small wooden buildings of forty-three years ago, one now sees magnificent structures, quite like a college campus. There are some twenty buildings in all with an endowment of about three million dollars. Every summer investigators, professors and students come from all parts of the United States. The Marine Laboratory offers advanced instruction to a limited group, carefully selected from the best students of biology in American Universities. One hundred and forty students can be accommodated, but there are many more applicants. A splendid five-story building for the study of oceanography was opened a few weeks before our visit. Here ocean physicists, ocean chemists, meteorologists, and geologists and marine biologists are working to solve the secrets of the sea. The laboratories are busy places and at night they are brilliantly lighted as the students go about their work. Besides all these buildings, the institution has a research ship called the *Atlantis*, built through the generosity of the Rockefeller Foundation. The *Atlantis* is one of the most specialized ships afloat, being equipped with machinery for handling nets and studying the sea floor plus the study of fish, pressure, temperature, currents, and other problems of off-shore fishermen. This is the spot where biology is enshrined and the spirit of Louis Agassiz still hovers.

"Said the master to the youth,
We have come in search of truth,
Trying with uncertain key,
Door by door of mystery."

Leaving Woods Hole we went by steamer to Nantucket Island, the last output of the United States, thirty miles at sea. In the October, 1931, issue of the *Atlantic Monthly* is an interesting article entitled "Nantucket's First Cup of Tea" by Ruth Starbuck Wentworth, which describes early life on this island. The name Starbuck indicates the writer is a member of one of the oldest fam-

ilies of Nantucket. Another good preparation for visiting the island is to read the book by Mary Starbuck, "My House and I." Her father was the captain of a whaler and the writer's youth was bound up intimately with those brave years of Nantucket History. For a small island, Nantucket has much to offer its visitors, no matter what their tastes may be. The island is one of the best examples of how our forefathers lived.

The little town of Nantucket is a gem of early American architecture, with its famous Starbuck houses, the Whaling Museum, the Old Rotch Warehouse, the Pacific National Bank, the historic Old Mill built in 1746; the oldest house, the Coffin House built in 1686. These are but a few of the show places. I love the little Cape Cod houses one finds in the narrow lanes and streets. The houses are mostly of wood, weather-beaten gray in color, with painted green shutters, perfect in proportion, charming in the details of Georgian door frames and fan lights. On the roofs of the large houses are walks where the Captain's wife could go to watch for the return of her husband's ship after its long voyage to the Pacific. Nantucket dates back to 1672 and its history is filled with deeds of valor. Across the island over the moors of scrub oak and pine, green with bayberries, purple-gray with heather, moors which remind us of Scotland, lies the little seaside resort known as "Sconset" or "Siasconset." It is said to be one of the oldest resorts in America. It boasts a casino besides the Yacht Club and is a favorite gathering place for actors, artists, writers, golfers and just summer folks. There is an interesting school of lectures each season by distinguished persons held in what was formally the hayloft of a large barn, known as the "Tavern on the Moors." A delightful informality exists throughout the whole island. I had almost forgotten to mention Maria Mitchell, the first woman astronomer in America. In her youth she assisted her father, William Mitchell, a noted astronomer, and later made some important discoveries herself. Many honors were conferred on her and she became professor of Astronomy at Vassar College and Director of its Observatory. She was presented with an Equatorial telescope on behalf of the women of America. A tablet to her memory has been placed in the Hall of Fame at New York University.

Leaving Nantucket with its surrounding sea, one is reminded of the following quotation from Fielding:

"For my own part I confess myself so fond of a sea prospect that I think nothing in the land can equal it, and if it be set off with shipping, I desire to borrow no ornament from the terra firma, a fleet of ships is, in my opinion, the noblest object which the art of man hath ever produced; and far beyond the forces of those architects who deal in brick, in stone, or in marble."

Returning to Woods Hole, we journeyed on to Boston, "The Hub of the Universe," or, "The Athens of America." It has such a host of memories, historical and otherwise. However, there is one place of pilgrimage for every doctor in Boston Town—the Massachusetts General Hospital and The Ether Room at the top of the hospital, where in the operating room, on the 16th of October, eighty-five years ago, sulphuric ether was used as an anesthetic for the first time. What relief William Thomas Green Morton brought into the world of suffering humanity! It is all too difficult for us in these days to visualize the horrible operations of the days before, when attendants held down the extremities of agonized patients. See the place where pain was first banished by anesthesia.

The shore road to New York is delightful all the way, great broad highways, seaside resorts and little old New England towns with "greens" and band stands. Two years ago we drove into the ancient city of Avignon, France, the one time home of the Popes. On another day this year we stood in the city of New York, and through a drizzly rain looked up at the great groups of buildings which make up the new Medical Center. It was then that I realized what the writer in the *New York Times* meant by his title "Towers of Avignon on the East River." This wonderful group of buildings occupies three blocks lying just north of the

Rockefeller Institute for Medical Research. Some of the buildings rise to a height of 350 feet, all overlooking the East River. The story of the planning and erection of these buildings is a fascinating one. Henry R. Shepley, who drew the plans, is a member of the firm of Coolidge, Bulfinch and Abbott of Boston, the architects of Harvard University and builders of hospitals all over the world. The Center consists of the Presbyterian Hospital of the City of New York, with this quotation over its entrance, "For of the Most High Cometh Healing"; the Sloan Hospital for Women; the Vanderbilt Clinic; the School of Medicine of Columbia University; a Nurses' Home; Nurses' Schools; buildings devoted to nervous diseases and other specialties of medicine.

Homeward bound. We proceed out Riverside Drive and along the Hudson River with its fine estates like the parks and palaces of the Old Country, through the Washington Irving country and the home of Edgar Allen Poe. Here, too, are the great reservoirs that supply New York with its water. The views up and down the Hudson River from the Storm King Highway, with the mountains towering in the distance, are truly magnificent. Continuing on through the "Finger Lakes Country" and "Far above Cayuga's Waters" we came to Ithaca, the home of Cornell University. From Niagara we retraced our steps through Canada and Home. Bliss Carman has described the joys of the road:

Now the joys of the road are chiefly these:
A crimson touch on the hardwood trees;
A vagrant's morning, wide and blue.
A shadowy highway, cool and brown,
Alluring up and enticing down
From rippled water to dappled swamp.
The outward eye, the quiet will,
From purple glory to scarlet pomp;
And the strident heart from hill to hill.
An open hand, an easy shoe,
And a hope to make the day go through.

641 DAVID WHITNEY BLDG.

MICHIGAN'S DEPARTMENT OF
HEALTHC. C. SLEMONS, M.D., Dr.P.H., Commissioner
LANSING, MICHIGAN

NEWAYGO HEALTH DISTRICT

Another consolidated health district in Michigan has been placed in operation. The new unit is entitled the Newaygo Health District, and includes the three counties of Newaygo, Oceana and Lake. Temporary headquarters have been established in the court house at White Cloud. The unit is being financed by the following organizations: The Children's Fund of Michigan, the Rockefeller Foundation, the United States Public Health Service, the Michigan Department of Health and by each of the three counties.

The director of the new unit is Doctor Guy R. Post. Doctor J. B. Shumaker is employed as dentist and Mr. Carl Anderson is the sanitary inspector. The nurses are Mrs. Betty Hurt, Baldwin, Lake County; Miss Margaret Andrews, White Cloud, Newaygo County; Miss Clodia Johnson, Hart, Oceana County. The name of the clerk is to be announced later.

Doctor Post took charge of the unit on February 20 and is proceeding as rapidly as possible to complete plans whereby a good program of health work can be carried on.

The new unit of three counties now brings the total number of counties in the state receiving the services of full-time well trained health officers, to 28. Arrangements have already been agreed upon whereby Allegan County will be added to this list. It is expected that the Allegan Unit will be put in operation about April 1.

INFLUENZA

About the middle of February rumors came to the Michigan Department of Health that influenza was making its appearance in the state. The health officers of the principal cities and of the full-time district and county health departments were requested to report on the general situation in their districts. Fifty questionnaires were sent to these districts asking for information as to school attendance and number of cases and the nature of the infection as compared with other years.

In general the replies indicated that in many communities there was quite a sharp

outbreak of upper respiratory infections, school attendance being reduced in some instances as low as fifty per cent. Illness was for the most part mild, of two to five days' duration and very rarely followed by pneumonia. Outbreaks in a given community usually subsided in a week or ten days.

These first reports indicated that there were quite a few small islands of infection widely scattered over the state; that within the territory of these "islands" the infection was present first among school children and followed soon by involvement of the adults and quickly dying out in that area but moving on to other districts. It does not appear that there are sufficient data to justify the prediction of an outbreak such as that in 1918.

CHILD HYGIENE ACTIVITIES

Dr. Ida Alexander and Miss Helen Linn, R.N., nutritionist, are conducting a series of Women's Classes in St. Clair County. There is an enrollment of 188 women in the county who each week attend these classes and learn about the care of the prospective mother, the newborn infant and the growing child. Dr. Muriel Case is conducting a similar series of classes in Ingham County with an enrollment of 308.

Miss Annette Fox, R.N., is conducting a series of Child Care Classes in Dickinson County, with an enrollment of 861 girls. Other classes in Child Care are being conducted in Van Buren County by Miss Bertha Cooper, R.N.; in Hillsdale County by Miss Nell Lemmer, R.N., and in Osceola County by Miss Beatrice Ferriby, R.N. The total enrollment for Child Care Classes conducted by staff nurses at the present time is 2,151.

Miss Martha Giltner has been transferred from the northern half to the southern half of Berrien County. She has completed five months of prenatal nursing in the northern part of the county and during that time has had 300 prospective mothers under her supervision, the majority of whom were referred to her by local physicians. Miss

Giltner will be located in the southern half of the county for five months. She was sent to do prenatal nursing in Berrien County at the request of the County Medical Society.

SWIMMING POOLS

During the past four years the Michigan Department of Health has taken an active interest in the operation of artificial swimming pools. Data have been collected on location, type, equipment and operation of all pools in Michigan.

On August 13, 1931, the State Council of Health adopted two pool regulations. One relates to the approval by this Department of plans and specifications for all new pools to be built after January 1, 1932, and the setting up by the Department of minimum rules pertaining thereto. These rules are now formulated and are contained in Engineering Bulletin No. 17.

The second regulation requires that a permit be secured from the Department to operate an artificial swimming pool after January 1, 1932. Permits are free, need not be renewed, but are revocable. The second regulation also requires that the Department set up rules pertaining to the operation and use by bathers and spectators of swimming pools. These rules are now printed and are contained in Engineering Bulletin No. 18.

There are three classes of pool permits, two unconditional and one conditional. Unconditional permit Class 1 will be given to those pools meeting all the requirements as outlined in bulletin 17. At present there are few pools qualified to obtain this permit. Unconditional permit Class 2 is given to a majority of the pools now in operation. To obtain such a permit the pool must meet the major sanitary requirements as set forth by the Department and fail in only one or two of the minor requirements. A conditional permit is issued to those pools of the "fill and draw" type, and to all other pools where operation is neglected or where they are lacking in pool water treatment equipment.

ENGINEERING BULLETIN NO. 14

Engineering Bulletin No. 14 has recently been revised and is now in the hands of the printer. It will probably be ready for distribution in about a month or six weeks.

The purpose of this bulletin is to show defects common in the construction of

private wells, with suggestions for improved construction so as to avoid contamination reaching the well water from the top. It will consist of about 20 pages with eight illustrations.

Copies may be obtained by anyone on request.

RATS AS CARRIERS OF MEXICAN TYPHUS FEVER

Herman Mooser, M. Ruiz Castaneda and Hans Zinsser, Boston, recovered virus indistinguishable from the ordinary virus of tabardillo, or Mexican typhus fever, from the brains of rats trapped in Mexico City in locations where cases of typhus fever had occurred, and during a period in which a moderate epidemic of typhus fever was prevalent. This work is a direct confirmation of the evidence obtained indirectly through fleas by Dyer of the existence of a reservoir of typhus fever in rats and confirms the original suggestion made by Maxcy, in 1926, in regard to the epidemiology of the North American disease. The belief that the virus recovered from the rats is identical with that of Mexican typhus fever is based on typical reactions in guinea-pigs, with elevated temperature and testicular swelling, the presence of characteristic *Rickettsia*, immunity reaction and the development of Weil-Felix agglutination reactions in inoculated rabbits. The manner of possible transmission of the disease from rats to man is being investigated by an analysis of the insects found on the rats and in the houses where typhus fever has occurred. This work is being continued in Mexico City and will be reported on at a later date. Also, the frequency with which rats infected with typhus fever can be found cannot be judged until many more animals have been collected, this communication being merely in the nature of a preliminary report.—*Journal A. M. A.*

HOSPITAL TRAINING OF INTERNS

HAROLD L. FOSS, Danville, Pa., maintains that irrespective of how well organized the intern service may be and of how great the effort put forth by the heads of departments to render the training of the most practical value, the greatest accomplishment will not be achieved without a certain basic principle being borne in mind. The young physician fresh from the medical school and entering his intern service begins now to practice more of the science than of the art of medicine. He is in the most formative period of his existence, keen to learn, wide-eyed and enthusiastic, trusting and hopeful, relying tremendously on the guidance of his chiefs, so much so that it places a great responsibility on them the significance of which none too frequently bear in mind. The student acquires a sense for scientific work only in his student days, and the degree of scientific training and interest imparted to the young man in the medical school (*and hospital*) determines his intellectual level for the rest of his life. Clinicians should fully appreciate their obligations as teachers, realizing that their rôle is hardly second in importance to that of the men who have guided the student during his college years and that it is their privilege by their precept and example, by their opportunity to stimulate his latent enthusiasm, by the inspiration of their own personalities to afford him in the most important phase of his professional career that guidance so important in molding and shaping and directing his destinies to the end that his life becomes a failure or a success largely as the clinicians choose to make it.—*Journal A. M. A.*

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APRIL, 1932

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon

EDITORIAL

DR. JUDD'S ADDRESS

Dr. E. Starr Judd, President of the American Medical Association, was the guest speaker at the Wayne County Medical Society, on February 16. In an address which we are privileged to print (page 243), he discussed the relation of the physician to the public. He emphasized the importance of the general practitioner not only in his capacity as attendant upon the sick, but also in the rôle of clinical research. It is the function of the general physician to apply the knowledge gained by research workers. They are no more qualified to make application of this knowledge than is the physi-

cian to attempt research work in the highly specialized laboratories.

Dr. Judd defines the function of the medical profession, namely as that of advising, treating and caring for the sick; of planning and directing programs of preventive medicine and public health, and thirdly of protecting the public against the activities of pretenders in medicine.

The personal nature of medicine is emphasized. The socialization of medicine should not be carried any further than it is, in the interests of all concerned. Medical associations which formerly looked entirely to the professional improvement of their members should, however, recognize the social, economic and political changes that had taken place as a result of the development of scientific medicine. Many county medical societies have public relations committees, the duties of which consist in promoting a good understanding with society at large, which in turn includes the adjusting of differences of opinion between organized medicine and other groups. Close relations should be established between physicians in general and those engaged exclusively in the practice of preventive medicine. Public health and preventive medicine are the direct result of advances in knowledge and practice of clinical medicine and the two should never be permitted to drift apart.

In discussing the economic relations of medicine, Dr. Judd gives some interesting statistics on the relation of illness and medical care to the national population, in anticipation of the report of the committee on the cost of medical care which is to be given next fall.

In the matter of political relations of medicine the speaker warns against dipping too deeply into politics. Such political influence as the medical profession can wield should never be other than that pertaining to the control of scientific medicine and its relation to society. Yet this of itself calls for greater activity than in the past.

It is hoped that every member of the Michigan State Medical Society will read this thoughtful and instructive address.

THE BEAUMONT LECTURES

Professor Howard B. Lewis in the eleventh Beaumont Foundation lectures under the auspices of the Wayne County Medical Society, the first of which is presented in

this number of the Journal, has selected a topic fundamental to an understanding of living phenomena. Ever since the proteins were recognized as substances uniformly present in animals and plants, they have been considered as perhaps the most important constituents of living matter. Chemists have studied the synthesis and decomposition of proteins and have learned considerable about their structure and reactions. Chief among the contributions of these men during the past century is the concept that proteins are what the constituent amino acids make them. One protein differs from another in the kinds and proportions of the amino acids that it contains. Hitherto almost insurmountable difficulties have confronted the biochemist in his attempts to follow the changes in proteins as they pass through the body. Recent experimental studies promise that synthetic amino acid diets which meet all of the protein needs of experimental animals will be available within a year or so. By the use of these the biochemist will then make considerable advances in protein metabolism. Various studies, however, have pointed the way to an understanding of amino acid and protein metabolism. It is of particular interest, then, that a summary of the current viewpoint on the amino acids should be available at the present time.

In his first lecture Professor Lewis discoursed about cystine, the first amino acid to be recognized, recalling its metabolic importance and its clinical relationship in the disease cystinuria. The second lecture (see May number of the Journal of the Michigan State Medical Society) deals with the general functions of the amino acids in metabolism.

The proteins which are taken into the alimentary canal as food are acted upon by the digestive enzymes of the stomach and upper intestinal tract. The products of protein digestion, the amino acids, after absorption by the intestinal mucosa find their way into the portal venous system and are distributed by the blood stream to various parts of the body. One tissue or another temporarily absorbs amino acids. These are utilized in three ways. First, certain of the amino acids are used, in the young and growing body, in the production of new tissue proteins. This results in growth. Once the tissues are completely formed they persist indefinitely in the body and are not sub-

ject to wear and tear. In the adult little or no amino acids are used in the maintenance of the tissues already formed. A second function of the amino acids is of importance throughout life. Certain of the absorbed amino acids in the tissues lose their acid characters of their amine groups and are recombined with others to form hormones. In this way thyroxin, insulin, adrenalin, glutathione and histamine, the chemical regulators of body metabolism, are formed. Finally, all excess amino acids which have been taken into the body are converted, chiefly in the liver, to glucose and to an unusable nitrogenous substance, urea, which is excreted. In broad terms, the above viewpoint suggests mechanisms through which the amino acids contribute to the formation of body tissues, to the humoral control of important body functions and to the supply of energy for body processes.

W. T. DEMPSTER.

ARE WE ENTERING THE TWILIGHT?

A book published four years ago bore the strangely suggestive title of *The Twilight of the American Mind* in which the author pointed out, long before the depression period was even thought of, the scarcely apparent fact that workers of high technical ability were being thrown out of employment and thereby eventually eliminated by the mechanization of industry and by scientific business organization. When the book was written its thesis was scarcely more than prophetic. Today it has become a sad reality. It is reported that fully one thousand musicians in New York City alone are facing destitution. Many teachers and high class clerks, all over the country, are being eliminated from the careers they had once chosen for themselves. This is probably one of the saddest phases of the economic depression, inasmuch as it has been such a blow to the cultural side of life.

The future of the nation depends upon the proper training of children and young adults who must succeed the present generation who have apparently made such a failure industrially as well as in a broad, administrative way.

Carlyle once spoke of "That corporative knave, society." The present social condition can be attributed to no single cause but may be laid to the folly of "That corpora-

tive knave, society." The way out may be evolutionary, a trial and error method.

The higher life of the nation is served by its teachers, its actors and musicians as well as those in other professional walks. Economy is necessary and must be exercised. Everyone sees it now when it may be too late. The greatest care should be taken, however, that its results may not fall too heavily upon our leaders and interpreters of the best in thought and art. Education should be made to suffer least of all. The final outcome will depend upon the quality and wisdom of leadership of the nation and the fact must be ever before us that those on whom we must depend are now in the schools.

MEDICO-LEGAL DEFENSE

Last year was one of the severest in the history of the Michigan State Medical Society in the cost of medical defense. Nothing but a full paid-up membership in County and State Society will enable the State Medical Society to meet the exigencies of such a situation should it prevail during 1932. For the monthly expense of defending malpractice cases during 1931, see page 160, February Journal of the Michigan State Medical Society.

If fire insurance premiums were permitted to lapse even a day, the policyholder would be a heavy loser in the event of a conflagration. A malpractice suit may eventuate in greater loss than that occasioned by a fire.

Hitherto, the State Medical Society has carried many delinquent members. It is no longer able to do so. As a result a member's name on the list of delinquents will mean that he forfeits the right to protection if threatened with a suit for malpractice.

Membership in county and state medical society and American Medical Association is as much a necessity to the practicing physician as an automobile and office equipment. It should be looked upon as important a "fixed expense" as either of the necessities mentioned. Prudence demands that it be so considered. No one should deny himself the benefit of such protection from the day he begins practice until that time when age or other factors compel him to retire. Even if one must resign from organizations, fraternal or social, do so, but maintain a live connection with the county medical society.

POST-HIPPOCRATIC MEDICINE

"Just as after the death of Socrates the essential unity of his teachings broke up into a variety of schools, such as Cynics, Cyrenaics, Megarians, and in particular the Followers of Plato, so after the death of Hippocrates medicine became split up into a number of sects, some further and some less far removed from the central doctrine of their master; each at its best emphasizing some important aspect of medical truth, but each in turn, as is the habit of sectarianism, running into strange and impossible extremes while remaining incapable of grasping the Hippocratic system as a whole."*

Perhaps the greatest scientific name after Hippocrates was Aristotle. He might have said, as Bacon did many centuries later, "I have taken all knowledge to be my province," for he was not only a scientist but a philosopher as well. His philosophy dominated thought until modern times. He wrote on botany, zoology, comparative anatomy, embryology and anatomy. He is said to have described over five hundred different animals. Garison speaks of him as being at his best in logic, ethics and natural history. While he made valuable contributions to medical knowledge he cannot be said to have founded a school. He was a pupil of Plato, but could hardly be called a contemporary of Hippocrates inasmuch as he was only fourteen years old when Hippocrates died.

There were four recognized post-Hippocratic schools of medicine: (1) the Dogmatists, (2) the Empirics, (3) the Methodists and (4) the Pneumatists. The most important member of the Dogmatist school was Diocles, who came to the fore a short time after the death of Hippocrates. Galen spoke of him in the highest terms as one who bore a close resemblance to the Father of Medicine. Diocles was born at Euboea about 400 B. C. His writings embraced the whole field of medicine. He was the first to differentiate pleurisy from pneumonia. Diocles was very modern in his doctrine that a local affection should not be considered or treated without reference to the body as a whole, that is, without consideration of the general condition of the patient.

It might be explained that the term Dogmatist, as applied to this early school of healing, was somewhat different from the modern significance of the word. The word *Theorist* would better describe the sect. Another important member was Praxagoras of Cos (340-320). He was a pupil of Diocles and in turn a teacher of Herophilus of the

*Hippocrates and His Successors in Relation to the Philosophy of Their Time. R. O. Moon, M.D., Longman's Green and Company, London.

later Alexandrian school. He was the first to distinguish between arteries and veins. The pulse was regarded not as being transmitted from the heart but as something adherent in the arteries themselves. He thought the arteries contained only air. Praxagoras was the first to give the vena cava its name, *hollow vein*.

"The most distinguished characteristic of the Dogmatists," according to Moon,* "was that they had taken as their guiding motto the saying of Hippocrates that 'the physician who is also a philosopher is godlike.' " They adopted their philosophy from the *Timæus* of Plato with results that were not wholesome to medicine. In this dialogue, among other things, Plato sets forth his conception of the physical world, including also some ideas on anatomy and physiology. Plato was, however, a metaphysician and not a scientist. He regarded both physicians and lawyers as useless and held that they should be banished from his ideal republic. In the following paragraphs from Plato's *Laws*, Book IV, he gives an interesting description of two types of doctors:

"And did you ever observe that there are two classes of patients in states, slaves and freemen; and the slave doctors run about and come to slaves and wait for them in the dispensaries; practitioners of this sort never talk to their patients individually nor let them talk about their own complaint; the doctor prescribes what he thinks good out of the abundance of his experience, as if he had no manner of doubt, and when he has given his orders, like a tyrant he rushes off with equal assurance to some other servant who is ill and so he relieves the master of the house of the care of his invalid slaves.

"But the other doctor who is a *freeman* attends and practices upon freemen and he carries his inquiries far back and goes into the nature of the disorders; he enters into discourse with the patient and his friends, and is at once getting information from the sick man and also instructing him as far as he is able, and he will not prescribe for him until he has at first convinced him; at last when he has brought the patient more and more under his persuasive influence and set him on the road to health, he attempts to effect a cure.

"Now, which is the better way of proceeding in a physician and in a trainer? Is he the better who accomplishes his ends a double way, or he who works in one way, and ruder and inferior?"

And again (*Plato's Laws*, Book X):

"For every physician and every skilled artist does all things for the sake of the whole, directing his efforts towards the common good, executing the part for the sake of the whole and not the whole for the sake of the part, and you are annoyed because you do not see how that which is best for you is, as far as the laws of creation admit, best also for the universe."

*Loc. cit.

The Empiricists, to quote the late Sir Clifford Allbutt, were the "philistines of medicine." The word *Empiric* has unsavory associations so far as modern medicine is concerned—with us it means *irrational*. However, the post-Hippocratic physician was a subtle reasoner. The school was a reaction from the dogmatic sect with its disposition towards theorizing. The Empiric was an early clinical observer who bent himself to the task of treating his patient with as rational methods as he could command. In this respect his methods resembled those of Hippocrates, who paid great attention to clinical observation and who was guided to a very great extent by experience. Unlike Hippocrates, however, his reasoning was not inductive; he did not try to construct a general rule from isolated data. The founders were Philinos of Cos and Serapion of Alexandria, both pupils of Herophilus and Erasistratus of the Alexandrian School. They concerned themselves with immediate rather than with ultimate causes of disease. Research in remedies occupied their time to a large degree, this largely due to the stimulus to the school by the great commerce of the Ptolomies which included many drugs not known before. It was an age of experimentation with poisons and their antidotes; such drugs as henlock, hellebore, aconite and henbane were first known at this time.

The Empirics laid great stress on *groups* of symptoms without concerning themselves with the nature of disease or its causes. Disease was defined as a "union of symptoms which is observed always in the same way in the human body." This school was comparatively long lived, since it did not become entirely extinct until the early part of the third century of the Christian era.

* * *

The Methodists. According to the Methodists the "cause of disease lay in constrictions and relaxations of the pores, between the atoms of which the body and its fluids are composed." "For this school," wrote Allbutt, "all pathology was interpreted and summed up in the doctrine of molecules and pores, of *strictum* and *laxum*." This doctrine has its analogue at the present day in the permeability of membranes. Generally speaking, the Methodist considered acute disease to be a *status strictus* and chronic disease a *status laxus*.

With such a doctrine, therapeutics be-

came a very simple matter. The *materia medica* consisted of astringent and laxative measures. For astringents, the Methodists used cold air and cold water, vinegar, alum and lead plasters; their laxative remedies included venesection, diaphoretics, leeches, poultices and warmth. The Methodists did not believe in specific remedies any more than they believed in specific diseases.

The school had its origin about the time of the passing of medicine from Alexandria to Rome. The founder was Themison of Laodicea and the date about 50 B. C. The best known member of the school, however, was Thessalus, who maintained that medicine could be learned in six months. Thessalus, who took to himself the credit of founder, seemed almost totally ignorant of the work of his predecessors. "I have," said he, "founded a new sect which is the only true one, being obliged to do so because none of the physicians who have preceded me has found out anything useful for the preservation of health nor for banishing diseases, and Hippocrates himself has uttered many harmful maxims on the subject." He attracted a large number of the working class as pupils who were anxious to become doctors in six months, much after the twentieth century chiropractic sect.

The chief ornament of the school, however, was Soranus* the biographer of Hippocrates.

* * *

And lastly the Pneumatists. The Pneumatist was an offspring of the Dogmatist school. The sect consisted of many physicians who joined it for the purpose of opposing the Methodists. They got their name from their belief in *Pneuma*, which they regarded as an active principle which was the determining factor of health and disease. Aristotle, in the fourth century B. C., proclaimed the doctrine of an aerial substance which was introduced into the body by means of the circulatory system. The Pneumatists thought that the aerial substance or entity passed from the lungs into the heart or arteries and disease was in large measure due to *Pneuma*. Consequently, climate, heat and moisture had a great deal to do in causing health or disease.

The founder of the sect was Athenæus,

who practiced in Rome about the middle of the first century A. D. He taught that the *Pneuma* was the world-soul or the living self-conscious God from which the souls of men, animals and plants proceeded. The Pneumatists paid great attention to diet, in which respect they resembled the Hippocratic school.

THE TUBERCULOSIS PROBLEM

Tuberculosis case finding has rapidly advanced in recent years. The modern program deals chiefly with the field of prevention and is supplementary to, rather than a substitute for, the established methods of diagnosis. It is made possible by the use of a particularly important phase of tuberculosis which, though previously known to a degree, is now brought out to its proper prominent position. This disease, for a varying period of time, can be present in adolescents and young adults especially, without the victims being aware of illness. Also, at its very beginning, a physical examination in a large proportion of cases will result in negative findings, because the involvement is too slight to produce physical signs. It is apparent therefore that there is a *great field among those seemingly healthy*.

The results of a program of this type recently carried out in Michigan are very interesting. In one high school fourteen cases of adult type tuberculosis were discovered by tuberculin testing the students and X-raying the reactors. This was one per cent of those tested as against the average of 0.4 per cent in the entire enrollment of 5,689 pupils in several schools. Analyzing the fourteen cases further, we are faced with some very interesting data. In only one of these students was there a history of contact, which means that in the ordinary program of thorough examination of contacts, only one of the fourteen cases would have been discovered. But three of these pupils had any symptoms whatever, and thus at the best only three would have gone to a physician, when as a matter of fact not one sought medical care. Abnormal physical signs on examination were found in only four of these students and therefore that would have been the result of general examinations. All the fourteen could be found only by the added modern method of *tuberculin testing* and *X-raying the reactors*.

The 1932 National Tuberculosis Associa-

*For a fuller account of the post-Hippocratic sects the reader is referred to Lecture IV, *Hippocrates and His Successors*, by R. O. Moon, and to Chapter VII, *Greek Medicine in Rome*, by Sir Clifford Allbutt; also see note on Soranus, Page 140, February, 1932, *Journal of the Michigan State Medical Society*.

tion slogan of "Tuberculosis Causes Tuberculosis" can best be furthered by instigating the above program through the entire State with the active coöperation of all the physicians. On complete analysis of results found in the above mentioned high school, there was definite evidence that one girl with advanced tuberculosis transmitted this disease to five others in her class. How much additional damage was done can be partly discovered by further observations.

If we are to find all the early cases, it is necessary to X-ray all adults, particularly those up to the age of thirty-five years, without a preceding tuberculin test and irrespective of whether there are any symptoms or physical signs. Also, a negative diagnosis should not be made without a corroborating X-ray. This method results in finding the disease at its onset, making it easy to procure cures by modern surgical collapse therapy if indicated. In one of the largest institutions in this state 77% of the patients are today receiving some form of this therapy, whereas but a decade ago medical care only was given.

It is suggested that (1) all X-ray societies adopt the classification of adult type tuberculosis, childhood type and suspects. This will result in standardization of terms that would be better understood by the general practitioner; (2) full use be made of chest clinics as teaching centers, whether regular or traveling clinics, the latter particularly in sparsely populated areas; (3) general practitioners be given complete facilities to acquire knowledge of modern advancement and treatment of tuberculosis; (4) general practitioners take a more active and prominent part in anti-tuberculosis work, which will result in improvement of the health of the community as well as material benefit to themselves.

D. S. BRACHMAN.

A VALUABLE SECRET

Looking over an old volume of the *Detroit Lancet* (long since gone to its rest) I came across a paper in the number of August, 1878, two or three paragraphs of which seem worth reproducing. We will call it a "valuable secret."

"There was, 'once upon a time,' a physician who had a student to whom he had imparted the art and mysteries of his profession, till he (the stu-

dent) supposed that he had acquired all that his preceptor had to impart, and thought it was time to go to seek his fortune by the practice of that which he had learned. As he was about to take his leave, his preceptor said to him: 'My son, you have studied long, and have learned much, but there is one thing of more importance than all that you have yet learned, that I have not yet communicated to you, and without which you are illy prepared to go into the world to practice the sublime art of medicine.'

"The student was surprised to hear this, but as he was animated with the praiseworthy ambition of learning all that there was to learn, he besought his master to communicate the much coveted secret on the spot. This the physician was willing to do, but he protested that it could not be imparted without a fee proportionate to the importance of the matter since it had cost him much study to discover the secret, which would be a safe and sure guide to the student in every emergency, and was, besides, a principle of such wide application that it was equally fitted to all diseases, and one that would, if he faithfully followed his precept, make him useful to the world.

"The student paid and departed, bearing with him his great secret in a sealed envelope, with orders not to open it till he was called to see his first patient. The occasion having arrived, the newly fledged doctor, somewhat puzzled over his first case, broke the seal of the envelope, and read:

"Be sure never to do anything to make your patient worse.' The student's first thought was, that, in the language of modern slang, he was badly sold; but on reflection he concluded that, since the information cost him so dearly, he would use it, and by faithfully and diligently following the precept, he became a famous physician, and accumulated great riches."

THE PHONOGRAPH AS A VOICE CORRECTIVE

Everybody knows about the phonograph of Edison, which is one of the greatest inventions of all times, although few have heard about the invention of the telephone by Philipp Reiss, demonstrated before the Society on Physics, October 26, 1861, Frankfurt-on-the-Main. Many know of the later improvement by Alexander Graham Bell and about the Hertzian waves and the invention of the vacuum tube in the radio apparatus by Dr. Lee De Forest, writes Dr. Emil Amberg in the *Rainbow*, of which he is the editor.

These efforts have changed for the better the standard of culture. The ear-handicapped derive great benefit from the accomplishments of these men. There is one phase of the phonograph which has not received sufficient attention. In 1889 Edison demonstrated his phonograph in Heidelberg, Germany, at the meeting of the German scientists and physicians and, inasmuch as he did not master the German language, his representative, in Edison's presence, spoke about the phonograph. He mentioned a point which is of great interest. A German soprano singer had sung into the phonograph. In the reproduction she detected nothing in the delivery which was out of the ordinary, but, when the number of revolutions was reduced, thus transposing her voice to a lower pitch, the singer could detect mistakes which she had made and she could therefore correct them. This phenomenon with which Edison was acquainted over forty years ago is not sufficiently appreciated. The domain of the mind is, indeed, of surpassing magnitude. The great majority of people follow only slowly in the footsteps of the giants in the realm of thought.

WEELUM AGREES WITH OUR EDITORIAL

Ah! Mon! bit yer ha'in' a graund editorial th' noo on th' "twilicht o' oor min's." It's nae oor cultural society wha has fallen doon. It's depressed o' coorse. Wha thing widna be depressed th' noo? An' its nae oor big business wha has fallen doon, else they wid a' be bankrupt th' noo. Its th' business wha wis nae foonded on guid business wha is in trouble. What has fallen doon is oor politicians. They are doon in th' mire, in th' quicksand an' saft clay o' wee politics, floonderin' a' aroon' like a chicken wha's heid's been cut aff. There's mud a' over their claithes, an' they hae'na a plank o' ony kin' tae pry themselves oot o' this depression, aye,—an' their attack on th' cultural side o' life by closing art museums an' scuils, show us beyond a' manner o' doot, that they canna master th' situation.

Their min's dinna work in th' richt direction. They think anly o' how tae collect taxes an' tae spend a' they collect an' tae switch funds tae suit extremities. They are nae minded tae do mair work themselves or accept mair responsibility. They dinna seem tae ken that th' people o' Michigan wid govern themselves wi'oot sae mony political machines an' political papsters.

There's talkin' th' noo, o' sellin' a lot o' fairms because th' taxes are no paid. Wull ah'm bold enough tae ask, why should th' taxes be paid? Th' fairmers haena got their mony's worth for th' taxes they hae paid. Th' farmers can govern themselves for a'maist nothing.

Noo dae ye ken what ah ken, an' what ah'm tellin' ye? Th' maun wha mak's his livin' frae th' groon' an' mak's his hame on it, an' brings oop his family on it, should nae be penalized wi' taxes, an' the maun what has a wee hoos on an acre o' groon', an' grows his cabbage an' kale, shouldna hae tae pay taxes on it. Thae people should be encouraged in this independence, an' wi' their wee hames, they wull nae neglect th' cultural side o' life.

And dae ye ken wha mair ah'm thinkin'? Ah'm thinkin' if th' state tak's ony o' thae fairms, it micht drive a guid bargain by gi'en them tae aboot sixty per cent o' oor politicians an' a' th' lame ducks, sae as tae encourage thae chaps tae become self supportin' an' no be barnacles on th' bottom o' th' ship o' state.

These are vital days. We're in th' mornin' oors o' a terrible crisis, ah'm tellin' ye, an' we're needin' th' noo, a he-man o' culture an' power tae lead us.

Oor revolutionary crisis gi'ed us Washington. Oor slavery crisis gi'ed us Lincoln. This crisis o' ungodly corruption an' political inefficiency wull gi' us —WHO?

Th' challenge is thrown doon tae th' he-men o' th' country.

Ah weel, it's a bonnie nicht th' nicht. Guid nicht.
WEELUM.

ODDS AND ENDS

"The scientifically trained man is the only one who has anything worth while to say but he hasn't yet learned how to say it."—Anon.

* * *

Many persons pride themselves on being of a practical turn of mind. Disraeli defined the practical man as one who practices the blunders of his ancestors.

* * *

The New York Physicians Art Club is composed of a group of physicians who have adopted as a hobby some form of art. Early in March their annual art show was held in which the exhibitors numbered seventy-three. The exhibits included landscapes and marine paintings. The subjects are outside of medicine, indicating the fact that the

physician artists pursued the work as recreation. The scalpel is replaced by the paint brush in a real sense when these doctors are on pleasure bent.

* * *

I am wondering if, with our public education in matters pertaining to health, we are not making the laity too health conscious. A man walked into a restaurant the other day and called for a bowl of soup. The waiter brought the desired dish and set it down before the fastidious customer and went about his work. The diner, on discovering two cockroaches in the soup, summoned the waiter to ask him what he meant by bringing him soup with cockroaches in it.

"Them ain't cockroaches," replied the waiter, "them's vitamin bees."

* * *

At a recent luncheon given in honor of Dr. John E. Clark of Detroit by the senior or quarter century club of the Wayne County Medical Society, the guest related an incident that happened early in his practice which goes to show the unfaltering faith of the old-time patient in the doctor of half a century ago. Dr. Clark was called to see a child of a family whose physician was absent in Europe. He assured the mother (this in the pre-antitoxin days) that her child was very seriously ill and in all probability would not recover. The mother in despair cried, "Oh, that Dr. — were only home. He was with us when we buried the other three children."

* * *

Now it is all clear—as mud. "The term chiropractic when used in this act shall be construed to mean and be the name given to the study and application of a universal philosophy of biology, theology, theosophy, health, disease, death, the science of the cause of disease and the art of permitting the restoration of the triune relationships between all attributes necessary to normal composite forms, to harmonious quantities and qualities by placing in juxtaposition the abnormal concrete positions of definite mechanical portions with each other by hand, thus correcting all subluxations of the articulations of the spinal column, for the purpose of permitting the recreation of all normal cyclic currents through nerves that were formerly not permitted to be transmitted, through impingement, but have not assumed their normal size and capacity for conduction as they emanate through intervertebral foramina—the expression of which were formerly excessive or partially lacking—named disease."—Quoted from the New Jersey Chiropractic Act.

* * *

We have received a copy of The Daily Mining Journal, published in the Upper Peninsula of Michigan, which contains a letter by Dr. C. F. White-shield, President of Ontonagon County Medical Society, protesting against the sweeping statement made recently by Dr. Arthur Dean Bevan, a former President of the A. M. A., in which he is credited or discredited with the statement that "Over 90 per cent of physicians of America are bootlegging liquor prescriptions." We quite agree with Dr. White-shield's protests against this statement and believe that the statement is absolutely contrary to facts. On such subjects as "bootlegging alcohol prescriptions" or "fee splitting" or anything else that has been attributed to the medical profession, the scope of any one man's experience is too limited and confined to too small an area to justify any kind of statement. The vast majority of physicians are as law-abiding as the very highest grade citizen of this republic. Any person making such a statement which reflects upon the profession of which he is a member is remiss in his duty "as a debtor to that profession." (See quotation from Bacon at the head of the editorial department of this Journal.)

CORRESPONDENCE

PHYSICIAN WANTED

March 1, 1932.
Winn, Mich.

Dear Sir:

You have been referred to me to help us to secure a physician to practice in our town. Our community needs a physician and I feel sure that if a doctor located here he would have a good practice. Can you recommend a doctor who would locate here?

Sincerely,
G. E. Starkweather.
(P. M.)

COUNCILOR ACTIVITY

March 11, 1932

Dr. Frederick C. Warnshuis,

This is to inform you, that on the evening of March 10th, I had representatives from all the societies in my district, at home for dinner. Those present were Dr. Burt of Ithaca, Dr. Highfield of Alma, Dr. Race of Caro, Dr. Dougher of Midland, and Dr. Kempton and Dr. Anderson of Saginaw.

At this meeting, I emphasized the appointment of a Public Relations Committee, and also brought up the questions as outlined by the council.

Trusting this is satisfactory, I am,

Yours fraternally,
J. H. POWERS.

To the Editor of the Journal of the Michigan State Medical Society.

That it's an ill wind that blows nobody good, is an old saying. My long climb back to health from the deep depths of a great physical depression has given me time and inclination to read much.

Nothing that I have read has given me more pleasure and profit than the Journal of the Michigan State Medical Society which you so ably edit.

In the current number let me congratulate you on "Taxes." You have hit the nail on the head a good swat. More power to you.

Good old "Weelum," whoever he is, touches the spot, and I would like some day to clap him on the back.

Expect to be back in Detroit May 1 or thereabout. So until then here's to you.

Yours truly,
DON M. CAMPBELL.

Miami Beach, Florida.

March 19, 1932.

It is almost needless to say that every reader of this Journal will be pleased to hear that Dr. Campbell is making such a speedy recovery and that he will soon be back to his old familiar haunts. The Journal extends its best wishes.—EDITOR.

March 25, 1932

The Editor of the Journal of the Michigan State Medical Society: The Wayne County Medical Society through its Public Health Committee is taking a very active interest in Tuberculosis. It arranged a very fine series of postgraduate lectures on Tuberculosis at the Herman Kiefer Hospital, delivered by Dr. Henry S. Willis of the Maybury Sanitarium. Daily clinical conferences have been held by the staff of Herman Kiefer Hospital since November 15.

Each Detroit hospital has devoted one staff program to Tuberculosis. Two evening programs on Tuberculosis have been addressed by Dr. Alfred Henry of Indianapolis, and by local specialists. Our Society, together with the Department of Health, and the Tuberculosis and Health Society, of Detroit and Wayne County, will put on an intensive "Tu-

berculosis Finding Campaign" during April and May.

School children are our objective this year. A letter to each parent will urge him to take his child to his physician, who during specified hours will make a skin and a physical examination for a nominal fee, or without charge if unable to pay. Co-operating Roentgenologists have agreed to X-ray the positive reactors for a nominal fee. A special hunt will be made for contacts and these will be given the same complete examination.

By radio, newspapers, billboards and addresses before all possible lay groups, interest will be stimulated in this important disease. We will reach the pre-school age child at its examination in midsummer. We hope to extend this work to other groups another year and intend to make this a yearly activity as we have done so successfully in our diphtheria prevention program.

Yours for a more intense interest in Preventive Medicine by all physicians.

HOWARD W. PEIRCE, Chairman,
Public Health Committee,
Wayne County Medical Society.

OBITUARY

DR. JAMES A. MILLER

Dr. James Miller of Farmington, Michigan, died at his home on March 1 at the age of fifty-eight years. Cause of death was apoplexy. Dr. Miller had practised his profession for thirty-two years. He was born in Southfield Township, Wayne County, and attended the Birmingham High School, after which he attended and graduated from the Detroit College of Medicine. He was a member of the Oakland County Medical Society and the Michigan State Medical Society. Dr. Miller took an active part in civic and fraternal affairs. He was also Director of the Farmington Peoples Bank. He is survived by his wife, Mrs. Grace Miller, and two brothers, Henry A. Miller of Redford, Michigan, and Volney Miller of Milford, Michigan.

GENERAL NEWS AND ANNOUNCEMENTS

Dr. R. R. Smith, Grand Rapids, has returned from a month's vacation spent in the south.

Dr. J. H. McRae, Grand Rapids, returned in March from a six weeks' visit to London clinics.

A Post-graduate Conference will be held at Mercy Hospital, Manistee, on April 6 for the 9th Councilor District.

See this issue for program of annual meeting of the state association of Industrial Physicians and Surgeons in Grand Rapids.

Dr. A. M. Campbell, Grand Rapids, attended the Philadelphia meeting of the American Association of Gynecologists and Obstetricians.

Mrs. W. J. Cassidy, wife of Dr. W. J. Cassidy of Detroit, died at her home on February 28. Dr. and Mrs. Cassidy were married in 1926.

Dr. A. E. Voegelin of Detroit delivered a series of four lectures on Cardiology at the Evangelical Deaconess Hospital, Detroit, as follows: Feb. 4, Rheumatic Heart; Feb. 11, Thyroid Heart; Feb. 18, Degenerative Heart; Feb. 25, Coronary Disease.

Dr. L. E. Hamlin of Norway, Michigan, read a paper on Tannic Acid Treatment of Burns, and Dr. M. Cooperstock, Assistant Professor of Pediatrics, University of Michigan, located at Northern Michigan Children's Clinic, spoke on "Recent Advances in Treatment of Childhood Conditions" at the February meeting of the Menominee County Medical Society.

The March meeting of Shiawassee County Society was held at a noon luncheon at Memorial Hospital, Owosso, on the 10th inst., with a good attendance present. The speaker was Dr. Angus McLean, of Detroit, who addressed the society on the "Relation of the physicians and local hospitals in treatment of all veterans." On motion the society went on record as being favorable to the passage of the bill now before congress proposed by the A. M. A. bearing on the treatment of veterans at home by their own physicians either at home or in a local hospital.

Dr. W. H. Marshall of Flint was tendered a complimentary dinner on his birthday, March 23, by the Genesee County Medical Society. Dr. Marshall is accredited with bringing "the Hurley Hospital from a third rate country hospital to one of the outstanding institutions of the county." The guest speaker at the banquet was Dr. J. H. Elliott of Toronto, a classmate of Dr. Marshall. Other speakers included Dr. Carl F. Moll, president of the Michigan State Medical Society, Dr. L. M. Bogart, Dr. James E. Davis, Detroit; Dr. A. C. MacKinnon, Atlanta, Michigan; Dr. Marshall, and W. B. Smith.

Our Representatives in Washington are: Senators: Arthur H. Vandenberg, Grand Rapids, Michigan; James Couzens, Detroit, Michigan.

Representatives

District

- 1 Robert H. Clancy, Detroit, Michigan.
- 2 Earl C. Michener, Adrian, Michigan.
- 3 Joseph L. Hooper, Battle Creek, Michigan.
- 4 John C. Ketcham, Hastings, Michigan.
- 5 Carl E. Mapes, Grand Rapids, Michigan
- 6 Seymour H. Person, Lansing, Michigan
- 7 Jesse P. Wolcott, Port Huron, Michigan.
- 8 Michael J. Hart, Saginaw, Michigan.
- 9 James C. McLaughlin, Muskegon, Michigan
- 10 Roy O. Woodruff, Bay City, Michigan.
- 11 Frank P. Bohn, Newberry, Michigan.
- 12 W. Frank James, Hancock, Michigan.
- 13 Clarence J. McLeod, Detroit, Michigan.

The Northern Tri-State Medical Association will hold the fifty-ninth annual meeting Tuesday, April 12, 1932, at the Academy of Medicine Building, Toledo, Ohio. The program is as follows: Psychiatric Clinic State Insane Asylum, Toledo, Ohio, Ora O. Fordyce, M.D., N. W. Kaiser, M.D.; Orthopedic Clinic, Gillette Clinic, Toledo, Ohio, Edward P. Gillette, M.D.; Dermatological Clinic, U. J. Wile, M.D., Prof. Dermatology, University of Michigan; The Fluid Status of Syphilis Therapy, U. J. Wile, M.D., Prof. Dermatology of the University of Michigan; Papilledema, W. R. Parker, M.D., Prof. Ophthalmology, University of Michigan; The Recent Studies in Blood Chemistry, H. B. Lewis, M.D.; Sulphydryl—The Basis for Further Studies in Cell Division, Lanckenau Hospital, Philadelphia, Pa.,

Stanley P. Reimann, M.D.; The Control of Pollen Allergy, Warrent T. Vaughan, M.D., Richmond, Va.; The Results of Parathyroidectomies, Max Ballin, M.D., and Plinn W. Morse, M.D., Harper Hospital, Detroit, Mich. The evening session will be held at the Commodore Perry Hotel, where the program will consist of a banquet and address entitled Lessons of Bone and Their Treatment, by Dean Lewis, Professor of Surgery, Johns Hopkins University, Baltimore, Md.

DR. BAUER COMING TO THE UNITED STATES

Dr. Julius Bauer, Professor of Medicine in the University of Vienna, will be in America next September on tour. His visit is sponsored by a group of medical men in Northeastern Ohio, who have arranged for a series of lectures in a number of the cities of that part of that state, as well as in some other states. Dr. Bauer is known as one of the ablest internists in Europe, and a teacher of world-wide renown. He is a master of excellent English, and has a wide repertoire of subjects in clinical medicine. His terms for lectures are quite moderate, and his acquiescence in desired subjects is well assured. It is hoped that some of the groups engaged in the intensive study of internal medicine in Michigan can see their way clear to securing the services of this admirable teacher. A very small amount from the pockets of a group of ten or twenty physicians will secure to these students and their friends an opportunity of contact with the latest in European, and particularly in Viennese, medicine.

Full particulars may be obtained in regard to this whole matter by addressing Dr. William M. Donald, Detroit, or Dr. Edward B. Pedlow, Lima, Ohio.

MEDICAL ECONOMICS

CAN WE AFFORD STATE MEDICINE?

J. G. R. MANWARING, M.D.

FLINT, MICHIGAN

Part II

A SUGGESTED PROGRAM FOR ORGANIZED MEDICINE

It does seem as though we are being hurried along to the day when government will take over the practice of medicine whether it is advantageous to the public or not.

There seems to be a lot of feeling displayed among physicians when discussing this problem but we cannot convince by passion nor rule by arrogance. We will not get far by calling names, venting indignation when our "sacred" calling is questioned, lamenting loudly and prematurely the passing of the family doctor or condemning more or less sincere troublesome welfare agencies.

We can arouse very little sympathetic support by pointing out such a degree of progress, search for truth, devotion to clients and sacrifice in service as few groups have experienced.

Discussions of this kind, coming from the heart and not from the head, lay the proponents open to sceptical criticisms for which material of some kind is always found.

The public is not interested in the welfare of phy-

sicians as such; they are looking only for a special type of service at the fairest terms they can get.

Instead of the common type of approach to this subject it seems that it would be a lot better to consider it from the standpoint of the public. And instead of waiting to see what will happen we should adopt a real program based on fundamental things.

As far as possible this program should be freed from the vagaries of emotional fears, the inertia of dumb conservatism and the phantasmagorical dreams of the underdone enthusiast.

No program can be safe unless founded on knowledge. The Committee on the Costs of Medical Care has already done a great work in revealing facts. We could well use it as an example.

We have heard many versions of how State Medicine in its various forms has worked in other countries. These reports show widely divergent views and must in part be based on superficial knowledge or bias.

Nothing is so helpful in plotting the future as a study of the past. Experience is a much better teacher than unchecked reasoning. In arriving at the facts upon which to base a future program, a first hand investigation of what is being done and what has been done should be made. These studies should be made by commissions or committees with members representing the different interests involved—business men, social workers, historians, economists, patients, philanthropists, politicians and others should be members of some of the various needed committees as well as dentists, hospital executives and physicians.

The committees need not be large and most of them need not be expensive. They should give full reports of their findings and, as they are largely devoted to finding facts, there should be few differences. If differences do occur, minority reports should be given.

The A. M. A. could finance this work or possibly some interested organization or individual might do so.

A few of the fields calling for investigation are indicated here:

1. There is a fear that our government is extending its functions so far that there is a real danger of the burden of taxes thus necessitated leading to a not distant bankruptcy with repudiation, revolution by peaceful or forceful means, or what not. For this reason alone the additional tremendous burden of medical care may be very unwise. This may well be made a subject of study.

2. There is a strong suspicion that the costs of medical care as organized and given by a department of government would be like so many of its other business ventures and cost so much more than its benefits warrant that it would eventually fall of its own weight. This should be looked into.

3. There is a difference of opinion as to the quality of service to be expected from such a government service. There is plenty of material of all kinds to be found upon which to base a sound opinion as to the truth in the matter. This should be gone over by a suitable body.

There are some problems nearer home to the profession which need clarifying. These are matters of dispute and misunderstanding between the public and medical profession and should be investigated freely and freely reported upon. The confidence of the public can be obtained in no other way.

4. Our registration laws should be looked over. As they are now they are so formulated that they are causing such a multiplicity of disputing cults as to lower the esteem with which all are regarded by the public.

5. Another question is the system of free services received by a large proportion of the people at

the expense of the physicians and their patients. This is made possible by the great number of physicians who are so anxious to acquire additional learning and skill in special fields that they readily take up this burden laid upon their willing shoulders by paid workers.

They receive little or no compensation for this work and they will not so long as they solicit it on such terms. There seems to be no other field where such an exploitation of a profession and the public occurs.

A sincere, mixed committee representing various groups might suggest a suitable system of post-graduate training for specialists which could be obtained without their leaving home and with some mitigation of the present evils.

6. The problem of health insurance of a compulsory kind is being advocated now. How has it worked? Is it a good method for us to adopt? A careful study might give us a lot of light on this question.

7. Last fall the head of one of our great national organizations advocated the application of certain business practices to medicine. There is a very grave question as to whether more business methods and more business ethics should be used in the professions. The ethics of business should be carefully scrutinized by an open minded body and some information along this line obtained before we accept the advice of those leaders who would have us adopt up-to-date business methods.

8. The question of group practice comes up. Here is a large field for examination. Are the temptations of practicing alone, unobserved and uncontrolled, by colleagues, too great for the integrity of some physicians?

Because of this apparently weak point in individual practice, suspicions are raised and accusations made that there are certain prevalent evils such as the secret division of fees, unnecessary operations, excessive charges and other practices common to ordinary business but certainly wrong when indulged in by physicians.

The advantage of a group in the way of assembled knowledge is often advanced. There are other considerations which may somewhat modify this claim, certainly as applied to state medicine. A very careful examination of group practice is needed for our guidance.

9. Are our young doctors sufficiently instructed in the social, economic and ethical aspects of practice? It seems to be true that many mistakes are made which could have been avoided by such instruction. The teacher who states that the question of ethics is summed up in the Golden Rule and that no further instruction is necessary, may be as wrong as the one who says that no training in the economics of practice is necessary, for the business of medicine is like any other business.

Just now commissions are not in good repute in some quarters, but, when problems are so complex and so large, no better way has been found to get honest-to-goodness data than by a representative commission or committee.

This program should be for the purpose of getting facts upon which we can build for the future. With them there is a possibility of crystallization of opinions and practice. Without them the same present uncertainty will remain.

In this series of articles certain of the above questions are discussed. Our own Society has appointed a committee, whose chairman is Dr. Wm. H. Marshall, which is starting similar investigations. It is hoped that it will be supported to the limit in order that the problems outlined above can be fully covered.

SOCIETY ACTIVITY

POST GRADUATE OPPORTUNITIES SPRING AND SUMMER

The Michigan State Medical Society, the Department of Post Graduate Medicine of the University of Michigan, the Detroit College of Medicine and Surgery and Staff Members of Detroit Hospitals

ANNOUNCE THE FOLLOWING COURSES FOR GRADUATES

ANN ARBOR—UNIVERSITY HOSPITAL:

April 11 to 15, inclusive—TUBERCULOSIS. Emphasizing the early diagnosis of tuberculosis, X-ray, clinical methods, and the medical and surgical approaches in treatment. University Hospital, Ann Arbor.

April 5 to 30, inclusive—OPHTHALMOLOGY and OTOLARYNGOLOGY. An advanced intensive course arranged for specialists. University Hospital, Ann Arbor.

Special Courses in all departments during Spring and Summer months.

DETROIT:

PRACTITIONERS' COURSE IN MEDICINE, SURGERY, OBSTETRICS AND PEDIATRICS. June 6 to 18, inclusive, 8:00 A. M. to 4:00 P. M.

PROCTOLOGY. June 6 to 18, inclusive, 8:00 A. M. to 12:00 M. Receiving Hospital, Detroit. Drs. L. J. Hirschman, E. G. Martin, and Associates.

GYNECOLOGICAL PATHOLOGY. June 6 to 18, inclusive, 8:00 A. M. to 12:00 M. Pathological Laboratories, Detroit College of Medicine and Surgery, Detroit. Practitioners taking this or the preceding course may arrange to spend the afternoons in the Library, Pathological Laboratories, or in the General Practitioners' Course.

Herman Kiefer Hospital—Diagnostic Clinics in Tuberculosis and Contagious Diseases.

Enrollment in all courses is limited. For further information, check courses of interest and mail to

Department of Post-Graduate Medicine,
University Hospital,
Ann Arbor, Michigan

MEMORANDA

The following facts are for your memorandum book or calendar:

1. Our annual meeting will be held in Kalamazoo, September 13, 14 and 15. The House of Delegates will convene on the 13th. Section Scientific Meetings will be on the 14th and 15th.

2. The American Medical Association meets in New Orleans the week of May 8. Write for your hotel reservations. Special rates on all railroads under the certificate plan. Be sure and secure a certificate from your local agent when you purchase your ticket.

3. Your dues are payable April 1. If unpaid, send your check to your county secretary.

4. Post-graduate courses and opportunity at the University and Detroit. A special course in Ann Arbor beginning April 11. Write for information.

TIME AGAIN

April First—they say it is “All Fools Day”—but we are not concerned with that feature. To the County and State Society April first is annual dues date limit. If you have not paid your current dues to your County Secretary you are in the suspension zone limit. Avoid suspension by remitting your dues to your local secretary and so avoid the penalties of suspension.

In these days you cannot afford to forego medico-legal protection and other organizational benefits. Act now to remain in good standing.

If funds are low your County Secretary will accept your note. See him at once. Neglect may be costly.

DON'T DO IT

In typewritten letters this identification mark “JD/JS” is assumed to mean that the letter was dictated by John Doe to Josie Stuot, the stenographer. Firms, institutions, employing several or many stenographers, adopted this identification means. When typewriters were made attainable by the rank and file many of us purchased one and felt we were in an advance class of business progressives. We used the typewriter and our own “hunt and pick” system to write our letters—some still do. And then a new custom became in vogue—to employ a stenographer, if you could afford it, and you dic-

tated your letters, they were typed and all you did was sign the letter. The “JD/JS” in the lower left corner conveyed to the recipient that you had graduated from the “hunt and pick” system and were up with big business in employing a stenographer. Some of us who owned typewriters were unable to hire stenographers and we had to content ourselves by doing our own typing. We were loath to be outdone by our more fortunate brothers, so just to remain in style, after finishing our own typing we slipped in a “JD/JS,” fictitious of course, in the lower left corner. How would the recipient know we didn't have a stenographer? The custom prevails generally.

We advise that you stop it. If you have a stenographer *forbid this identification*. Do not use it yourself. Why?

In a recent suit for libel and slander, the plaintiff presented letters sent by the defendant that were identified in the lower left corner by a “JD/JS.” The claim was made, and upheld by the court, that the identification mark was proof positive that the libel and slander statements had been made to a *third party*, the stenographer, and this won the case and a monetary verdict. Had the JD/JS been omitted from the letter there would have been no evidence of a third party and no verdict.

So forget style or pride. Ban the identification mark. Safeguard yourself in these days when we are prone to write “harsh words” to the party who doesn't pay his bill. In these depression days it is not a mark of “common class” not to have a stenographer, and slander or libel suits cost money.

OFFICIAL CALL

To the Officers, Fellows and Members of the American Medical Association

The eighty-third annual session of the American Medical Association will be held in New Orleans, Louisiana, from Monday, May the ninth, to Friday, May the thirteenth, nineteen hundred and thirty-two.

The House of Delegates will convene on Monday, May the ninth.

The Scientific Assembly of the Association will open with the General Meeting held on Tuesday, May the tenth, at 8:30 P. M.

The various sections of the Scientific Assembly will meet Wednesday, May the eleventh, at 9 A. M. and at 2 P. M. and subsequently according to their respective programs.

Edward Starr Judd, President.

Frederick C. Warnshuis,

Speaker, House of Delegates.

Attest:

Olin West, Secretary

Chicago, Illinois, March the fifth

SAGINAW PLAN

We propose that the Saginaw County Medical Society become responsible for the medical care of all indigent contagious diseases that are cared for in the Saginaw County Contagious Hospital, and for this service the Saginaw County Medical Society, through its advisory committee, proposes to contract with the Board of Supervisors to do this work for the sum of thirty-six hundred dollars (\$3,600) per annum. The medical society would further agree to have three doctors on call at all times, and a visit to the hospital by a doctor each day. The medical society would not agree, under this plan, to take care of contagious diseases in private homes, or any place other than the Saginaw County Contagious Hospital. It would be further provided that any doctor may take care of his own cases if he so desires, but that he would not be remunerated by the county for so doing. It should be specified that this service does not include laboratory work, either special or routine, and we recommend that special arrangements be made with the Central Laboratory to do and supervise this work as it does in our general hospitals. This work will be under the direct supervision of Dr. Pickett and an advisory committee appointed by the medical society. This group will formulate and act upon all standing orders and hospital policies, and it will choose three doctors for service each month. Each member of the medical society shall signify whether or not he is willing to participate in this plan. Those who wish to participate in this plan shall serve one month when their turn comes, and as for remuneration for this service, each shall share and share alike in the division of the money paid to the society by the county, providing that first fifteen dollars (\$15) of this division shall go to pay their dues to the Saginaw County Medical Society. Recognizing that this will entail more work for the secretary-treasurer of the society, it is recommended that he be paid a salary not to exceed one hundred dollars (\$100) per annum, from which he shall pay his own dues, and since he will be responsible for the money involved, the society should pay for a bond to cover same. Any doctor of the society who does not wish to participate in this work shall pay his dues as he has in the past, and shall not receive any of the money paid by the county.

Respectfully yours,

STUART YNTEMA, M.D.
ARTHUR LEITCH, M.D.
MARTHA LONGSTREET, M.D.
JULIUS POWERS, M.D.
WALTER SLACK, M.D.

Advisory Committee.

MEETING OF INDUSTRIAL SURGEONS

The annual meeting of the Michigan Association of Industrial Physicians and Surgeons will be held in Grand Rapids, Michigan, April 29, 1932, at the Pantlind Hotel.

The meeting will be called to order promptly at 9:00 A. M. for a clinical program. A business meeting will follow at 11:30 A. M.

At 12:15 there will be an open luncheon meeting. At this time there will be a conference on Insurance Relations, with a short discussion of the problems as related to the medical profession by a commissioner from the State Department of Labor and Industry and a representative of the Insurance Companies. Also, a short discussion on relation of employer to labor.

The afternoon meeting will consist of a clinical program and a short business meeting which will be adjourned promptly at 4:30 P. M.

At 6:30 P. M. there will be a dinner at the Pantlind Hotel. The speaker of the evening will be Dr. Volney S. Cheney, Secretary of the American Association of Industrial Physicians and Surgeons of Chicago.

A very interesting and unusual program has been arranged for this meeting of subjects of a clinical nature as well as those connected with the relationship of employer, employee, and Insurance Company, as also the Industrial Board and Labor Commission.

An unusually large attendance is expected, not only of the members of the Michigan Association of Industrial Physicians and Surgeons, but also those who are interested in this vast and rapidly growing division of surgery and medicine.

Further details will be announced in a later communication to all of the members, and those who are interested may obtain this information by writing to the office of the President of the Association, Dr. C. S. Gorsline of Battle Creek or Dr. J. Duane Miller, Chairman of the Grand Rapids meeting, Medical Arts Building.

The Kent County Medical Society is assisting the committee in arranging for this meeting. The Committee is composed of Dr. J. Duane Miller, Chairman, Dr. J. Newell Holcomb, Dr. Robert H. Denham, Dr. Leon E. Sevey, Dr. Henry J. Pyle, and Dr. William A. Hyland.

MINUTES OF THE MARCH MEETING OF THE EXECUTIVE COMMITTEE

The Executive Committee of the Council of the Michigan State Medical Society met in Grand Rapids at 6:00 P. M. on March 2, 1932.

Present:

Chairman—B. R. Corbus
Geo. L. LeFevre
C. E. Boys
J. D. Bruce

President—Carl F. Moll
Secretary—F. C. Warnshuis

and by invitation Dr. Earl I. Carr, Chairman of the Legislative Committee, and W. H. Marshall, Chairman of the Committee on Survey of Health Agencies in Michigan.

1. Dr. Carr, Chairman of the Legislative Committee, presented in detail the activities and discussions of his committee in the matter of legislative activity. On motion of Bruce-LeFevre, the work of the committee was commended, its activities approved and the committee assured of the support and assistance of every officer or any member of the society that they might deem advisable to call upon in carrying out the plans that the committee has under consideration.

2. The Secretary presented a request from the Chairman of the Medico-Legal Committee, Dr. Wm. J. Stapleton, Jr., for clerical assistance. After discussion the matter was referred to Dr. Bruce of the Medico-Legal Committee.

3. The Secretary presented a letter from the Chairman of the Medico-Legal Committee, Dr. Wm. J. Stapleton, Jr., presenting the position assumed by the society's attorney, Mr. Herbert V. Barbour, in the matter of annual retainer and compensation for his legal services. After discussion, on motion of Boys-LeFevre, this matter was referred to the Medico-Legal Committee for recommendation.

4. Upon motion of Boys-LeFevre, the Executive Committee designated the seniority rank of alter-

nate delegates to the American Medical Association as follows:

Carl F. Moll
Philip Riley
R. H. Denham
Henry E. Perry

5. Upon motion of Boys-LeFevre, it was decided that certain recommendations contained in the report of the special committee on Survey of Michigan Health Agencies should be held and not transmitted until the committee has perfected its final report and the House of Delegates has recorded its action upon the final report of the committee, for the reason that the final conclusions cannot be definitely determined and the policies adopted until the committee has completed its work.

6. Dr. Marshall, Chairman of the Special Committee on Survey of Health Services, reported in detail the plans that were being formulated for the conducting of the state-wide survey directed by the House of Delegates, and outlined in general the scope, extent and assistance required in conducting this survey. On motion of Bruce-Boys, it was resolved that the Executive Committee had listened with tremendous interest to the plans and program outlined by Dr. Marshall and that it was the sense of the Executive Committee that the survey be continued along the lines outlined by the committee and that the committee be authorized to engage the services of Dr. Sinai as field director of this work.

7. The Secretary presented a financial statement of the society which was filed.

The meeting adjourned at 10:45 P. M.

F. C. WARNSHUIS, *Secretary*.

POST GRADUATE INSTRUCTION IN PSYCHIATRY

A course of post graduate instruction in Psychiatry was held at the State Psychopathic Hospital from February 15 to March 15. This was attended by ten physicians, coming from each of the Michigan State Hospitals for mental disorders.

The instruction was conducted by the Staff of the Department of Psychiatry of the University of Michigan.

The course of instruction embraced clinical discussions and demonstrations on psychiatric disorders; the dynamic mechanisms in mental pathology; the technic of the psychiatric examination and preparation of records; neurological problems occurring with psychiatric disorder; practical experience in the examination of out-patients with psychiatric problems and lectures and demonstrations in the neuropathology of neuropsychiatric disorders.

RADIO BROADCASTS

The Radio Committee created by the House of Delegates has accomplished a splendid work. It has prepared a series of health educational talks for weekly broadcast. Contact was made with County Societies and through their local efforts time on the air was secured from stations in the following cities: Jackson, Lansing, Grand Rapids, Flint, Bay City and Benton Harbor. Broadcasts are being made once or twice a week from these stations.

In addition to these stations the Wayne County Medical Society is broadcasting from two Detroit stations two and three times a week.

The educational results will be increased if members will ascertain the hour of their local broadcast and then urge patients and friends to "tune in."

COUNTY SOCIETIES

CASS COUNTY

At the yearly meeting of the Cass County Medical Society, the following officers were elected:

President—Dr. Samuel Stevens

Secretary-Treasurer—Dr. S. L. Loupee

Delegate—Dr. W. C. McCutcheon.

It was voted to continue the joint meeting with the Berrien County Society throughout the year 1932. Though each society prefers to maintain a distinct organization, the joint meetings have proven highly interesting and profitable to both groups.

S. L. LOUPEE, M.D.

JACKSON COUNTY

The February meeting of the Jackson County Medical Society was called to order in the Memorial Room of the Elks Temple on Tuesday evening, February 16, with Dr. C. E. DeMay presiding. Dr. Frank VanSchoick, Chairman of the Health Education Committee, gave a report of the results of the Mantoux tests given to the pupils of the Jackson High Schools last fall. Of the 450 tests given, eighty-four were found to be positive. Of these, forty-nine pupils sought medical attention, twenty refused X-ray examination and fifteen were lost track of. Of the forty-nine seeking medical attention, thirty-three went direct to X-ray specialists and sixteen saw their own family physician. Of the latter group only three were advised to have X-ray examinations made. The results of the X-ray examinations in this series were reported as follows:

Active adult type tuberculosis, 0.0 per cent
Inactive type tuberculosis 3 plus, 7.0 per cent
Juvenile type tuberculosis 3 plus, 0.0 per cent
Juvenile type tuberculosis 2 plus, 23.0 per cent
Juvenile type tuberculosis 1 plus, 30.0 per cent
Juvenile type tuberculosis plus minus, 40 per cent

Dr. Lewis spoke briefly of the importance of the X-ray examination in the diagnosis of juvenile tuberculosis. He stated that this was imperative in all cases showing a positive Mantoux test as a diagnosis could not be made from the clinical signs or symptoms.

Dr. John Ludwick then introduced Dr. Frederick Collier, Professor of Surgery at the University of Michigan, as the speaker of the evening. His subject was "Mortality Factors in Acute Appendicitis." Attendance was sixty-eight.

NORTHERN MICHIGAN MEDICAL SOCIETY

The meeting of the Northern Michigan Medical Society, held at the Perry Hotel, Petoskey, Thursday, March 10, was called to order by President Stringham. Committee on Public Relations was appointed consisting of Drs. J. Stringham and Fred Wayne of Cheboygan County; Frank and Most of Emmett County; Duffie and G. H. Wood of Auburn County; and Armstrong and McMillan of Charlevoix County. Secretary Dr. Brenner was asked to serve as secretary of this committee.

Drs. L. B. Wood, G. H. Wood of Bellaire, and E. Christie of Cheboygan were admitted to membership.

Col. C. J. Gray, Petoskey, gave an interesting talk on "Dental Caries," which he illustrated with X-ray films.

The meeting adjourned.

E. J. BRENNER, *Secretary*.

LUCE COUNTY

The Luce County Medical Society met at the Newberry State Hospital on February 24, 1932. There was a 100 per cent attendance, and we had as guests the local dentists and graduate nurses. The speaker of the evening was M. Cooperstock from the Northern Michigan Children's Clinic, at Marquette. His talk on "Rickets and Enlargement of the Thymus" was illustrated by lantern slides and X-rays. We appreciated very much, and derived a great deal of benefit from, Doctor Cooperstock's talk.

GEO. F. SWANSON, *Secretary*.

SAINT CLAIR COUNTY

A regular meeting of Saint Clair County Medical Society was held Tuesday, February 2, 1932, at Edgewater Inn, Port Huron, Michigan. After the usual supper attended by twelve members and two guests, Dr. J. E. Gordon and Dr. F. H. Top of the Herman Kiefer Hospital, Detroit, Michigan, the meeting was called to order with the following members present: Doctors Patterson, Boughner, DeGurse, McNair, Fraser, D. J. McColl, McKenzie, Armsbury, Callery, Burley, Waters, Windham, Battley and Kesi.

Minutes of the preceding meeting were read and approved. Dr. E. R. McNair was elected to membership. Card of thanks from Mrs. Reginald Smith, thanking the Society for flowers sent at the time of the death of her mother, was read and placed on file. Letter from Dr. C. G. Jennings relative to subjects to be discussed by Dr. Hirschman at a future meeting was read and one of the four suggested themes was selected by motion, duly made, supported and carried. A letter written by a practising physician of the city of Port Huron was read and referred to the Grievance Committee. President Patterson announced the following committees: Medico-legal—H. O. Brush, Chairman; T. E. DeGurse and A. J. MacKenzie, members. Grievance—C. F. Thomas, Chairman; J. D. McColl and C. A. MacPherson, members. The consideration of a future meeting place was laid upon the table by motion duly made, supported and carried.

Dr. John E. Gordon, of the Department of Health of Detroit, addressed the Society on "Poliomyelitis." The subject was presented in a most interesting and practical manner and many important points were brought out. Among those stressed by Dr. Gordon were (1) seasonal occurrence, (2) probability of large numbers of immunes among the adult population, especially in the large centers of population, (3) distribution of the disease in states of Atlantic seaboard and New England and in the north central states, (4) symptomatology, (5) differential diagnosis, (6) proper time to do a spinal puncture, (7) importance of rest in bed, (8) importance of use of convalescent sera early if a supply is available, (9) advisability of use of whole adult blood early or at any time before onset of paralysis, (10) immobilization of affected extremities in treatment of paralyzes. Discussion of the subject by A. L. Callery, M.D., and several others was followed by the usual manner of closing by Dr. Gordon. Meeting adjourned.

A regular meeting of Saint Clair County Medical Society was held at the Edgewater Inn, Port Huron, Michigan, Tuesday, February 16, 1932. The following members and guests were present at supper: Doctors Patterson, Heavenrich, D. J. McColl, McNair, Bowden, Derck, N. J. McColl, Windham, Webster, Waltz, MacPherson, Boughner, Waters, Callery, H. O. Brush, Vroman, DeGurse, MacKenzie and John E. Campbell of Brown City, Mich.

After supper Doctors Fraser, Attridge and Wellman were present.

Meeting was called to order by President Patterson. The minutes of the preceding meeting were read and duly approved. Applications for membership were received from Doctors W. F. McNaughton and J. R. Ware, and committees were designated by the presiding officer to investigate the same and report at the next regular meeting. Communications were read and a committee consisting of Doctors Callery, H. O. Brush, Attridge, Wellman and MacKenzie was appointed to formulate replies to the questionnaire sent the Society by the Bureau of Medical Economics of the American Medical Association. A report from the grievance committee was read and placed on file. The Society decided to hold our next meeting at 6:00 P. M. instead of a half hour later because of a longer program arranged for that meeting.

The guest, Dr. John E. Campbell of Brown City, was then introduced by Dr. D. J. McColl. Dr. Campbell made a very interesting address, which was enjoyed by all present. Remarks were also made by Doctors DeGurse, Waters and MacKenzie. Dr. Campbell told of his early experiences as a country physician in the vicinity of Brown City. His talk was very interesting to all.

A regular meeting of Saint Clair County Medical Society was held at the Edgewater Inn, Port Huron, Michigan, Tuesday, March 1, 1932. Supper was served to twenty members and four guests at six P. M.

The meeting was called to order at seven-thirty P. M. by President Patterson, with the following guests and members present: E. E. Martmer, M.D., of Detroit; H. H. Learmont, M.D., and R. K. Hart, M.D., both of Crosswell, Michigan, and Mr. M. M. Ricketts, a representative of the Petrolagar Company, were present as guests of the Society; Doctors Patterson, Webster, Heavenrich, Waltz, MacKenzie, Thomas, Attridge, Battley, McNair, Boughner, Carney, Derck, Vroman, D. J. McColl, Schaefer, N. J. McColl, Sites, Waters, H. O. Brush, Kesi, LeGalley, Windham, Bowden, Wellman, MacPherson, Callery, Treadgold and Fraser.

It is needless to remark that the attendance at this meeting was gratifying to the officers of the Society. The program was exceptionally interesting and very much enjoyed by all present.

The minutes of the preceding meeting were dispensed with by order of the President in order to save time. After hearing from two membership committees the Society voted to receive J. R. Ware, M.D., 3322 Twenty-fourth Street, Port Huron, Mich., into membership and rejected the application of another physician. Communications were read.

The guest of the evening, Dr. E. E. Martmer of Detroit, made a splendid address upon the subject, "Use of convalescent sera in the treatment of contagious diseases." Unfortunately the Secretary is unable to report completely upon the subject as presented by Dr. Martmer. However, the points emphasized were roughly as follows: (1) the simplicity of the required technic, which Dr. Martmer described in detail with an observation that in the work at the Children's Hospital no difficulty was found in keeping the collected sera sterile; (2) the value of convalescent serum as a therapeutic agent, its dependability if potent and its freedom from objectionable reaction; (3) the speaker's belief that each sizable community should collect and refrigerate a stock of convalescent sera when available convalescent patients were at hand, to be used in future emergencies; (4) advantages of convalescent sera over horse sera; (5) the use of sera particularly in the treatment of measles, a disease with

a high mortality in Michigan. The speaker stressed the point that if the serum were administered between the fifth and tenth day after exposure, an attenuated form of the disease resulted, giving the patient future active immunity; (6) the use of serum in poliomyelitis, with the greatest benefit if given in the pre-paralytic stage at the onset of positive spinal fluid findings, although, said Dr. Martmer, it may be given later with beneficial result upon the further extension of the paralysis; (7) the use of sera in other diseases such as mumps, chicken pox, epidemic encephalitis, scarlet fever, etc.; (8) the use of adult serum in treatment of primary bronchopneumonia in children under the age of two. Dr. Martmer spoke of his experience at the Children's Hospital with a series of one hundred fifty such cases, in which the mortality was lessened fifty per cent in comparison with a group of control cases.

The discussion was opened by J. C. S. Battley, M.D., and following him were many others, many queries being addressed to the speaker relative to certain points considered in the subject during the address. Dr. Martmer in closing replied satisfactorily to the questions referred to above. In conclusion a rising vote of thanks was extended the speaker for his able address and for coming up to Port Huron in order to meet with the Society.

The second part of the program was the exhibition of motion pictures with sound on the subject, "Anatomy of the Female Pelvis and Perineum," by Drs. H. B. Kellogg and W. F. Windle, of the Medical School of Northwestern University, Chicago. Mr. M. M. Ricketts, representative of the Petrolagar Company, gave this part of the program. The elementary nature of the subject took many of those present back to the days of long ago spent in the dissecting room. The picture and the description of the same was very interesting and very much enjoyed by all present. It was observed that not a single member left the room before the completion of the program. A rising vote of thanks was given Mr. Ricketts.

Dr. Theo. Heavenrich announced to the Society that Mrs. W. J. Cassidy had passed away, and upon motion duly seconded and carried the Secretary was instructed to wire Dr. Cassidy the sympathy of the members of the Society. Adjourned.

GEORGE M. KESL,
Secretary-Treasurer.

WOMAN'S AUXILIARY, MICHIGAN STATE MEDICAL SOCIETY

MRS. J. EARL MCINTYRE, President, Lansing
MRS. W. E. McNAMARA, Secretary, Lansing

Mrs. McIntyre announces the following addition to her official family:

State Chairman of Public Relations Committee,
Mrs. George Van Rhee,
4108 Pasadena Ave., Detroit, Mich.

State Legislative Chairman,

Mrs. E. S. Peterson,
504 South Jackson, Jackson, Mich.

MRS. CHAS. J. BARONE,
State Chairman, Publication Committee.

Our National President-elect, Mrs. Walter Jackson Freeman of Philadelphia, is back home after a stormy voyage from Germany with her convalescent son. Our congratulations are to ourselves as well as to her for her safe return.

It is a frequent complaint among our Woman's Auxiliary that they never see "The Journal." Some

of the members may not have noticed that this Journal carries a section for the physicians' wives. It is hoped that each issue will be placed in the hands of every physician's wife before the month has passed.

BAY COUNTY AUXILIARY

The regular monthly meeting of the Women's Auxiliary of Bay County Medical Society was held Wednesday, February 24, at the Ann Peterson Tea Room. A delicious dinner was served to twenty members, after which the business meeting was called to order by the President, Mrs. C. A. Steward. Reports of the Treasurer and Secretary were read and approved. Announcement was made that members of the Medical Society were planning to entertain the Auxiliary in the near future. Time was spent folding paper towels for the Civic League Nurses. 27,000 were counted when we adjourned to meet with Mrs. J. W. Hathurst for the March meeting.

L. M. SWANTIK.

OAKLAND COUNTY AUXILIARY

The members of the Oakland County Medical Auxiliary are enjoying unusually interesting programs this year.

At the November meeting held in Royal Oak, Paul Honore, Detroit artist, addressed the group.

In January, at the luncheon meeting held in Pontiac, the guest speaker was Dr. Mercer Brennan of Plymouth. Her subject was "The value of a musical education to the child."

February 24, the Auxiliary celebrated the Washington Bicentennial by entertaining their husbands with a bridge supper, at the home of the president of the society, Mrs. Robert Baker of Pontiac. Thirty-one tables of auction and contract were in play.

With the wide variety offered members in our programs, and with at least one social meeting planned for the near future, the Oakland County group find an ever increasing number looking forward to the fourth Friday of the month—our regular meeting day.

MRS. FRANK MERCER,
Chairman Publication Committee.

WAYNE COUNTY AUXILIARY

The Woman's Auxiliary to the Wayne County Medical Society held their regular monthly meeting on March 8, 1932, in the Club Rooms, 4421 Woodward Ave., at 2 P. M.

No program was given at this meeting, the session was given over to committee reports and unfinished business.

The Wayne County Medical Society celebrated the Washington Bicentennial by holding open house for members and their families. Luncheon was served at 12:30, a tea and musical for the Auxiliary and wives of members from 3 to 5, dinner at 6:30, the day terminating with bridge and dancing.

The Annual Benefit Bridge Tea given by the Auxiliary on February 29 in the Club Rooms was a

success financially and socially. Eighty tables were in play.

Mrs. R. E. Loucks was hostess to the Board of Directors on February 18 at a luncheon given in one of the beautiful rooms of the Club. The table looked lovely with a centerpiece of spring flowers. All enjoyed the hospitality of our President very much.

MRS. CHAS. J. BARONE,
Chairman, Publication Committee.

PHYSICAL MEASUREMENTS AND PHYSIOLOGIC PROCESSES IN YOUNG CHILDREN

William Palmer Lucas and Helen Brenton Pryor, San Francisco, have tried to simplify classification of body build by merely comparing width to length of body. A single diameter of the pelvis was chosen for width, partly because it is easily measured, partly because the crests of the ilium are covered with relatively little subcutaneous tissues in children and partly because it is a constant measurement and not subject to changes with respiration as are the chest measurements. The widest diameter of the iliac crests was measured with calipers pressed firmly to obtain, as nearly as possible, the greatest width of the innominate bone. This measurement was divided by the vertex measurement to get the inter-cristal diameter in per cent of standing height, thus comparing two linear measurements of length and width to obtain a single index of build. In dealing with children the factor of growth makes comparison of direct measurements of doubtful value. This width-length comparison involves two very simple measurements which can be carried out in any office practice. The width-length index obtained gives direct information concerning the type of bony framework possessed by an individual. Therefore it is a measure of the unchangeable inherited characteristic of body build. Davenport has proved the genetic basis of body build. Nutritional status and body build are two separate entities which nevertheless may have a direct relationship to each other. As has been pointed out, a large heavy framework requires larger muscles to move it and is also capable of carrying a larger mass of fat and subcutaneous tissue than a small one. For this reason, large boned children may be classed overweight and small boned children may be classed underweight by height-weight table standards when both may be normal weight for their inherited framework. (The converse is true also.) The width-length index increases directly with the relative breadth of the child since it expresses the simple relationship of width to length of the body. Broad, stocky children have high indices and slender children have low indices. Indices vary from 130 to 190. The width-length index can be used to compare children of all ages since it expresses a relationship of each body to itself. Empirically, it can be said that a low index means a slender child with small bones and a high index means a broad child with large bones. The authors recognize the necessity of feeding children according to their powers of digestion and their individual anatomic needs. These two things are indicated by the body type, which can be measured satisfactorily by calculating the width-length index. If the existence of divergent body types is recognized which in the whole population grade imperceptibly into one another there will be a more labile conception of normal, and it should be easy to classify any given individual in a wide zone, as the standards for normal are different in these different zones. The three weight zones that the authors

recognize start with the central average or intermediate group whose proportions correspond closely to the ideal in the height-weight-age tables. This represents the mass of the population. But instead of considering variations in either directions as pathologic, i.e., underweight or overweight, a normal zone is recognized for the linear type individuals who are underweight according to height-weight-age tables but whose width-length ratio is small, below 150, and a normal zone is recognized for the lateral type individuals who are overweight according to height-weight-age tables but whose width-length ratio is large, above 170. A lateral type individual might actually be underweight even though he was heavier than the average in the height-weight-age tables and, conversely, a linear individual might actually be overweight even though he was under the average in the height-weight-age table.—*Journal A. M. A.*

MENTAL DERANGEMENTS IN HYPOTHYROIDISM

Emeline P. Hayward and Andrew H. Woods, Iowa City, assert that insufficiency of thyroid secretion sometimes shows its most striking effects through malfunctioning of the brain cells. The patient may become depressed and apprehensive, thought may become slow and bodily movements retarded. The condition is easily mistaken for a depressed psychosis. Or there may be irritability and excitement leading to the diagnosis of mania. Patients may show thought distortion with hallucinations and delusions, which may become so bizarre as to be interpreted as signs of dementia præcox. In these psychotic cases, even though the physical signs of myxedema are present, those signs are easily overlooked. This is partly because some physicians at once relegate patients who show mental derangement into a nimbus of mystery and infer that somatic disease cannot be expressed in mental symptomatology. A more excusable cause for overlooking evidence of physical disease is that the patient's mental attitude sometimes makes physical examination difficult or impossible.—*Journal A. M. A.*

INTRAMUSCULAR USE OF LIVER EXTRACT

Maurice B. Strauss, F. H. Laskey Taylor and advantages of the intravenous method and is decided—William B. Castle, Boston, present preliminary observations from which it appears that the intramuscular use of liver extract has all the theoretically practical both from a therapeutic and from an economic standpoint. Furthermore, some patients apparently prefer to inject a small quantity of liver extract intramuscularly rather than to ingest a large quantity of liver or to take an extract by mouth which is not altogether palatable. From the preliminary observations it seems possible that the extract necessary for a week's treatment when taken by mouth may, if given by daily intramuscular injections, suffice for from five to six months. The intramuscular method may be of even greater advantage in those cases requiring unusually large doses of extract by mouth or actually a life-saving measure in severely ill patients. The adequate treatment of cord lesions requiring large amounts of liver extract may be greatly simplified by the parenteral injection of liver extract alone or as an accessory to oral therapy. The authors describe a method of preparing an extract of liver suitable for intramuscular injection and highly potent in pernicious anemia. Maximal reticulocyte responses were obtained from the daily intramuscular injection of the extract derived from 10 Gm. of liver. The potential therapeutic and economic advantages of this method are suggested.—*Journal A. M. A.*

THE DOCTOR'S LIBRARY

SURGERY OF THE CHEST. By George F. Straub, M.D., F.A.C.S., with 341 illustrations, including 68 color plates. Pages 475. Price \$10.50. Charles C. Thomas, Publisher, Springfield, Illinois. 1932.

Thoracic surgery is one of the comparatively recent developments in the treatment of certain pathologic conditions of the chest. The past two decades have witnessed its evolution, which has placed it on a par with other branches of surgery. While this is true, the contributions of the thoracic surgeon have not penetrated into the minds of the medical profession at large. Hence the necessity of such a work as this. The author has assumed a knowledge of the anatomical and physiological data concerned with the subject. No one would attempt such regional surgery without a knowledge of the facts that anatomy and physiology present which are obtained to better advantage in the technical works on these subjects. The surgical treatment of pulmonary tuberculosis has been dealt with very thoroughly. The roentgenographic examination of the thoracic cage is very well presented by Dr. H. Arnold. A feature of the work which deserves special mention is the illustrations. As illustrating technic, the author has resorted to line drawings which do this very well. The photographic and radiographic illustrations are all that can be desired. The book is printed on a very fine quality of paper and very completely indexed, which makes it a convenient work for ready reference.

A TEXT-BOOK OF CLINICAL NEUROLOGY. By Israel S. Wechsler, M.D., Professor of Clinical Neurology, Columbia University, New York; Attending Neurologist, Neurological Institute and The Montefiore Hospital, New York City. Second Edition, Revised. 759 pages with 142 illustrations. Philadelphia and London: W. B. Saunders Company. 1931. Cloth, \$7.00 net.

The reception given to this textbook during the past five years has resulted in this new and up-to-date edition. Here the student and general practitioner as well as the specialist will find a digest of what is known in neurology. The author has brought the subject of encephalography up to date as well as the pathology of tumors of the brain. The epilepsies have been the subject of much study. The Oppenheim classification originally followed has been departed from and the author has rearranged his system of classification. An interesting feature is the references given at the ends of the various subjects treated.

W. J. S.

PROHIBITING MINDS AND THE PRESENT SOCIAL AND ECONOMIC CRISIS. By Stewart Paton, M.D., Lecturer on Psychiatry, Johns Hopkins University, Baltimore. Paul B. Hoeber, Inc., New York. 1932. Price \$2.00.

As may be assumed from the title, this is a timely book. Its three chapters deal with Civilization Shock, Remedies, and Educating the Intellectuals. The book, among other things, is an argument against the mental attitude that resulted in the eighteenth amendment. It deals also with the mental reaction that resulted in Russian communism. The so-called reformer is discussed at length in the first chapter in a way that is more vigorous than analytic. The third chapter, however, has a greater appeal. In it the author discusses the importance of rhythm as a factor in biologic life and points out the inconsistency of the present pace of social life. When we come as a nation to recognize this discrep-

ancy and to regulate our pace accordingly, instead of endeavoring to correct abuses by prohibitions, then and then only will we approach a condition of society in which individual men and women will lead more comfortable lives.

THOMAS SAY, EARLY AMERICAN NATURALIST. By Harry B. Weiss and Grace M. Ziegler. A foreword by L. O. Howard. 27 ill. 260 pp. Charles C. Thomas, Springfield, Ill. 1931. \$5.00.

Unlike most biographies which one peruses, this of Thomas Say will impress the reader as unusual. Instead of a psychological panorama composed by an author following a study of his subject, this work is a model of critical historical writing. Letters, papers and various other source materials are extensively quoted. The arrangement and selection of these are so well done that the reader is given an excellent account of the intellectual life of the United States as it was at the beginning of the nineteenth century.

At a time when biological studies were practically limited to the specimen cabinets and leisure of professional men, Thomas Say, as the first professional American naturalist, was a figure of no little interest. His extensive expeditions through the then unknown parts of the country, his ethnological studies on the Indians, his extensive publications on insects and shells, his friendship with a number of outstanding men, his relations with the early societies and his connections with the New Harmony social and educational experiment have been of considerable importance in the intellectual development of the United States.

Although the senior author is well qualified through his entomological training to criticize and evaluate the work of Say, he has preferred to present a complete and well documented account of the man, his work and his times—leaving specific evaluations, which are bound to be transitory, to his readers.

The publisher is to be commended both for his presentation of an outstanding biography and for the attractive format.

W. T. D.

ROENTGEN TREATMENT OF AGRANULOCYTOSIS

Albert E. Taussig and Paul C. Schnoebelen, St. Louis, call attention to the fact that cases of agranulocytosis are being observed with increasing frequency, so that it may be said to have ceased to be a rare disease. The symptom-complex of agranulocytosis has been circumscribed somewhat arbitrarily. While it is convenient to distinguish it from the bone marrow depression observed in benzene poisoning, in the course of antisyphilitic treatment and in the aleukemic stage of lymphatic leukemia, borderline cases are not infrequent, in which proper classification is difficult. Two of four cases reported by the authors show clearly that the fall in the granulocytic blood count may precede the appearance of a sore throat. A study of the literature reveals numerous similar observations and justifies the conclusion that the agranulocytic blood picture is the cause and not the result of the angina. Agranulocytosis occurs about twice as frequently in women as in men; the mortality in the two sexes is about the same. Of the methods of treatment at present in use, the most promising appears to be the irradiation of the long bones by means of minimal doses of X-rays. Transfusions are also apparently useful.

—Journal A. M. A.

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CONTENTS

The Super-University. Alexander G. Ruthven..	301	Famous Men in Medical History: Samuel D.	
Cancer Control in Michigan. Frank L. Rector,		Gross. Lawrence D. Dickey, A.B., M.D.....	334
M.D.	305	Michigan's Department of Health. C. C.	
The Role of Amino Acids in the Animal Organ-		Slemons, M.D., Dr.P.H.....	338
ism. II. The Physiology of the Animo		Editorial:	
Acids. Howard B. Lewis, Ph.D.....	307	Post-Graduate Opportunities	341
Service for the Ambulatory Diabetic. Don W.		The Ownership of X-ray Films.....	341
McLean, M.D., Eleanor J. Ford, R.N., and		Tuberculosis Bacillus Known for Half a	
Martha A. Alderman, B.S.....	314	Century	342
Retinal Tears at the Ora Serrata. Peter C.		Concerning Recent Graduates in Medicine...	343
Kronfeld, M.D.	319	On Advertising	343
Diffuse Hypertrophy of the Breasts. Max Bur-		Wavelengths	344
nell, M.D., F.A.C.S.....	324	A Bit of Medical History.....	344
Pigmentation and Keratosis Following the Use		General News and Announcements.....	347
of Arsenic. N. E. Aronstam, M.D.....	326	Deaths	348
Brain Abscess and Lateral Sinus Thrombosis as		Medical Economics:	
a Complication in Mastoiditis. A. P. Wil-		Can We Afford State Medicine? Part III.	
kinson, A.B., M.D., F.A.C.S.....	327	J. G. R. Manwaring, M.D.	348
Photographs of the Fundus Oculi. Frank L.		Society Activity.....	350
Ryerson, M.D.	330	County Societies.....	357
Traumatic Rupture of the Pancreas: Report of		Woman's Auxiliary.....	360
a Case. Henry K. Ransom, M.D.....	332	The Doctor's Library.....	361

THE SUPER-UNIVERSITY*

ALEXANDER G. RUTHVEN, Ph.D.
President of the University of Michigan
ANN ARBOR, MICHIGAN

I am using the term "super-university" as the title of this address merely to direct attention to the evolution which is taking place in institutions of higher learning. The word is unnecessary except for this purpose, since the term "university" is sufficiently broad in meaning to include all of the activities which it will represent for some time to come.

Nature of Functions.—The scope and functions of the highest school in our system of education are now undergoing attempted redefinition. Both educators and laymen are busy telling the world what the university should be and what it should not be. Strong differences of opinion are apparent: It should emphasize culture or stress professional training. It should compel the student to maintain certain standards of per-

formance, both scholastically and personally, or permit him to develop according to his own desires. It should sacrifice everything else to instruction or recognize research as a major objective. It should limit instruction to those students who can live on the campus for the time prescribed by a rigid curriculum or extend its teaching facilities

*Read at the complimentary dinner tendered to Regent Richard R. Smith of Grand Rapids, January 14, 1932, by the Kent County Medical Society and the Fifth Councillor District of the Michigan State Medical Society.

to those who find it necessary to be otherwise engaged while acquiring an education. It should attempt to train students only during the period of from four to seven years after graduation from high school or give some attention to adult education. It should assist adults in problems of material concern to them or refuse to give expert advice. It should attack practical problems or only encourage so-called pure research.

The literature embodying arguments on these and similar educational policies on which there is disagreement is so voluminous that it is impossible to cite it in detail in a short paper. Fortunately, however, it is unnecessary to follow closely the many controversies over the proper sphere and policies of the university. These will never be settled by balancing arguments upon the legitimacy of particular functions, and, educators being for the most part independent thinkers, individual schools will continue to be developed more or less heretically. While universities will thus probably, and perhaps preferably, never conform to a single pattern, it should be observed that many of the differences in policies and practice depend just now upon the point of view adopted as to the importance and place of extramural activities, including extension work, adult education, and service. The functions included in this general field may appropriately be considered with care both because of their apparent importance and because attempts to define our modern universities should not consist of efforts to fit these institutions to a Procrustean bed of preconceived notions, traditions, and the ideas of persons too myopic to appreciate in full their possibilities of usefulness. No study of universities that ignores the resources of the plants and multifarious needs of society can provide dependable results.

Cultural and Professional Training.—Admitting that an objective of the university is to educate youth, we must recognize that this training is designed to prepare men and women for life in the world as it is to be, and that life is living as well as being. In other words, it is futile to attempt to prove that our universities should exist for the sole purpose of training scholars or of providing a cultural background for others. One cannot distinguish sharply between cultural and practical training. Erudite investigators in every realm of knowledge are im-

portant to human welfare, but they constitute only one group in our social order and they are really practitioners. Indeed, true culture cannot be separated entirely from pursuits. A cultured man or woman without a business, if such a person exists, is like a flowering weed—possibly beautiful, but out of place.

It is true that ridiculous mistakes in emphasis have been made in introducing the objective of vocational competency into our universities. Institutions have even been guilty of giving academic credit for proficiency in skills which only need to be practiced to be learned, but to insist that vocational training should not be offered by universities in every necessary field of human endeavor, cultivation of which requires both an intimate knowledge of subject matter and a historical background, is impracticable. One may be excused for smiling at the inclusion of dressmaking and canoeing in a university curriculum, but logically he cannot object to departments of forestry, pharmacy, journalism, and business administration, and at the same time admit the traditional schools of law and medicine. Subjects of instruction proper to the university are those which provide a strict and regular mental and moral training comprehending the communication of knowledge, the cultivation of manners, and the regulation of practice. Thought cannot be divorced from action, and in curriculum-making the question of practicality is inconsequential.

Intramural and Extramural Instruction.—Anyone familiar with the conditions in the colleges understands the handicaps common to many students. Among these are inability to pay the full tuition at the beginning of the school year, the necessity of negotiating loans and of securing part-time employment, and the inability of some individuals to remain in school for four or more consecutive years. To conclude that no assistance should be given to such underprivileged students is to imply that opportunities for youth should be limited to individuals in a financially fortunate position. This thesis can scarcely be defended, and, unless it can be, one cannot argue cogently against a program of extramural education for those who cannot afford to attend the university for the prescribed periods of time.

No one will deny that the student will obtain less from any series of extension

courses that he would get by taking these courses on the campus, but this is no excuse for denying him such advantages as he might receive from instruction brought to him. It must be admitted that the tendency to give extension courses which will attract students and thus increase the size and income of the university has been all too common. The practice is to be deplored, but should not be allowed to obscure the value of the worth-while instruction that is now being given off the campus by many schools. When extension courses carefully maintain the ideal of progressive instruction designed to promote the intellectual growth of the student—an ideal which is fundamental to any real university—their designers are but extending the practice of the best schools of refusing to admit that brains and opportunity to develop them are restricted to those persons who have adequate means.

Whether cultural or practical, or both, as we insist it should be, education does not end with college. Organized and supervised study may be, and indeed too often is, abandoned with the last examination, but at least learning by experience continues. While it will always be true that "the gain of experience is the choicest fruit and the most valuable acquisition that man can obtain on the stage of creation," after as well as during college, study may greatly decrease the cost and time entailed in learning by the trial-and-error method. If the university may appropriately supervise study during and even prior to the college period, it is difficult to see why it may not as justifiably take an interest in the welfare of its graduates to the extent of aiding them in continuing their intellectual growth. Particularly is this deduction logical if alumni are expected to lend their assistance in the educational efforts of their schools. In these days of rapid increase of knowledge it is a foregone conclusion that even with the aid of experience the graduate will find it difficult to keep up with the progress in his special field of endeavor. He will always be able to use to advantage the aid which his university can give him, and it is a narrow view of the functions of those institutions which would forbid him their help.

But the alumni are not the only adults who have an investment in the university and who can and should use the facilities of the institution to conserve the time con-

sumed in learning. It has become evident that for our citizens generally the time has come in the evolution of our society when "we should aim at every adult person in this country an education which he cannot escape, and that, when it has found its mark and hit him, will drive him from his reliance on passion and prejudice and make of him a citizen of the Greek kind" (Baker). Continuous education being a necessity, the university, as the highest school in our system, is the one to which most adults must turn for instruction, and the institution is not doing its full duty to society if it does not recognize the education of adults as at least a legitimate function. The alternative point of view means duplication of effort and waste of facilities.

Research and Service.—If we cannot separate professional and cultural training and adolescent and adult education, neither can we entirely divorce research and service. To know his world, man must not only increase his knowledge but he is also required to conserve his knowledge. The function of investigation is now quite generally granted to universities, and this function will never be seriously threatened even by privately endowed and industrial research organizations. Striking as factory-made research may be in its immediately practical results, it can never be a satisfactory substitute for the disinterested efforts of individuals searching out the ultimate ramifications of truth. The hope of our society is to be found in no small measure in the labors of scholars, imbued with a love of truth for its own sake, to extend the bounds of human knowledge in all directions regardless of results. It is only in the university that these labors can be carried on continuously through the years, and it is in the university that the results can be accumulated and preserved as a vast heritage for future generations.

The old discussion of the relative values of pure and practical investigation is obviously a quite fruitless one. All research is practical, and the only recognizable distinctions are in the material rewards and in the length of the period between the time of discovery and the time of application of a new fact or truth in the business of living. If we have learned anything in this scientific era it is that the length of the interval between discovery and application is unpredict-

able except when research is applied to a problem the solution of which is of immediate and material concern to us. I am well aware that much labor that is called research is not correctly so designated, but, setting aside the mere accumulation of facts as not properly research, it is difficult to see any real difference between an investigation of the laws of evolution and a study of the possibilities of an insect-carrier in polio-myelitis, or between a study of certain laws of physics and the contribution which a knowledge of these laws can make to the explanation and correction of defects in steel.

There is frequently, of course, a difference between researches conducted with reference to a concrete end and those which presumably have only a potential value, in the material rewards which tend to accrue to the individual and the institution. I submit, however, that this difference is incidental from the university viewpoint, much as it may affect individual workers. There are just two criteria for the university to set up for judging the appropriateness of an investigation. First, is it research? That is, does it have possibilities of extending the realm of human knowledge by providing generalizations from which may be deduced the explanation of other facts? Second, are the results to be public property? The aim of the university is to aid society. The benefits to be derived from its investigation should be shared by all, not be given exclusively to individuals to be exploited at the expense of others or of the group. Whenever these two questions can be answered in the affirmative a problem may be taken up without apology, and the question of material rewards may be treated as a problem of administration and nothing more.

This conception of research and its place in the university inevitably leads to the conclusion that it does not affect the nature of a problem to be presented by a person who is not a scholar, and that consequently it cannot be fundamentally wrong for the university to attack any subject presented to it, whether it be submitted by scholars, private individuals, business concerns, or in fact any organization, if it is a problem whose solution will require real, and not pseudo, research. This is a part of the extramural service which some schools insist upon providing for their clientele. Another allied

phase of this service is the providing of information from the knowledge and experience of the members of the faculties and the storehouse of information represented by the laboratories and libraries of the institution. While theoretically well marked, practically the boundary between investigation and the furnishing of information is hazy and easily lost. Fortunately it is not necessary to observe it. If the university is concerned with the welfare of adults then it may certainly, and with propriety, give to them the advice which does not entail new researches, as well as the benefits of instruction and research. It is only necessary to observe that, the university being an organization of society, its advice, like the results of its investigations, must be made available to anyone who desires aid. For the university, as well as for the individual, service should become an aristocratic tradition.

Conclusion.—In short, the areas of interests have widened for the university, and several of them are projecting themselves beyond the college walls. The institution cannot decently become intellectually exclusive. It has, in the words of President Butler, "come to occupy a position of singular responsibility and authority. Dealing as it does with the conservation, the extension and the diffusion of knowledge, the university stands apart from every other institution and agency of man's economic, social and political life, while serving and conserving each one of these. The university is only incidentally and accidentally a school. It is primarily and chiefly a society of scholars who by reason of special capacity, special training and special opportunity become in their generation the conservators of that knowledge which represents human achievement at its best and the agency for the extension of that knowledge into new fields of interest and endeavor, as well as the means of diffusing knowledge over steadily widening areas of human interest and human action." Specific applications, and technics and social service in the broad sense cannot be ignored, and the conclusion can be defended that "a fair and discriminating association of theory and practice, with an approach toward application in upper college years, is sound common sense."

I can with some certainty anticipate one criticism of the conclusions I have expressed.

It is that this viewpoint would extend the university until the institution would be in danger of becoming thin and that *pari passu* the traditional major activity—the training of youth—might be relegated to the position of a mere side-show. I hasten to point out, however, that such a contingency, if it should arise, could be attributed correctly to poor administration. I am talking today of legitimate functions of the ideal modern, or, perhaps better, future university. All institutions will not be able to perform and stress equally all of the activities proper to universities as a group. Hampering conditions make administrators necessary, and the main task of university officers is to maintain a proper balance between, or emphasis

on, functions—a coördination which is to be determined in its details not alone by the facilities at the disposal of the institution, as is sometimes thought, but also by the relative importance of objectives as reflected by conditions. I am trying to say that the university as an institution is rapidly becoming the brain of society, that it should be nourished by the body politic, and that it should never fail in its task of adjusting and directing the activities of society through any narrow conception of its sphere of usefulness. It serves the whole body, and throughout life should guide it, not selfishly, nor for the good of any part at the expense of another, but for the sole purpose of securing and insuring the welfare of society.

CANCER CONTROL IN MICHIGAN

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EVANSTON, ILLINOIS

A few months ago we had a very pleasant visit with Dr. Rector. Feeling that few with whom we came in contact had the cancer situation so well in hand, we asked him to prepare a short paper on the subject of Cancer Control in Michigan. This article was written in response to our request. It is much superior to anything we might hope to write ourselves on the subject; we hereby accord our thanks to Dr. Rector for this favor.

—EDITOR.

During the past twenty years cancer has shown a marked increase as a leading cause of death in the United States, and since 1927 has occupied second place in the mortality table. Since 1924 one in twelve, or eight per cent of all deaths in the registration area has been due to this disease. Heart disease alone surpasses cancer as a cause of death in the United States today.

The annual economic loss due to cancer has been estimated at more than \$800,000,000. It respects neither race nor color, social nor economic condition. Its wide distribution, increasing death rate, and unknown etiology make it the greatest challenge now before the medical profession. On the other hand no other disease in the realm of medicine is so amenable to the skill of the physician. Other diseases run their course and the patient either dies or recovers with or without professional aid. The number dying is usually a small percentage of those affected. A cancer patient seldom if ever recovers without the intervention of surgery or irradiation, the efficiency of these treatments depending on the skill and experience of the physician using them and the early stage of the disease.

For the above reasons the control of the cancer problem is peculiarly in the hands of the medical profession and the hospitals. The known collateral factors bearing on

cancer are so few that only medical skill and proper institutional care at this time can make a constructive contribution to the control of the disease.

It is believed by those having the most experience with cancer that it is no longer a one man disease; that is, no one physician should undertake full responsibility for the diagnosis, treatment and care of a cancer patient. Team work is called for in that the pathologist should determine the type and grade of tumor before final treatment is undertaken; the radiologist should also contribute of his knowledge and experience to the decision as to treatment; the surgeon and internist have a contribution to make to the case in order that the patient may have the benefit of all phases of medicine that can best contribute to his treatment and care.

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That the suggestion for team work in cancer diagnosis and care is not an idle one is seen in the marked interest taken in this subject by physicians and hospitals throughout the country. Improved facilities for the diagnosis and treatment of cancer are being investigated and developed to the end that better service may be rendered to cancer patients and the mortality from this disease may be lessened.

The organized medical profession in Michigan has shown its interest in cancer by the appointment of a Cancer Committee of the State Medical Society for the study of this problem. From its inception, this committee has been very active in studying the resources and facilities of the state for the care of cancer patients. The interest and coöperation of local and district societies have been enlisted to determine what facilities are available throughout the state for the care of these patients. The recommendation of this committee that at least one meeting annually of each local society be devoted to cancer will do much to keep the problem actively before the profession throughout the state. The first report of this committee which appeared in the February issue of the *JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY* is a splendid presentation of the scope of its work.

The work of the recently organized Michigan Pathological Society, one of whose major objectives is the coöperative study of malignancy, will most certainly result in improved diagnosis of cancer or suspected cancer tissue. The development of organized cancer services in the University Hospital at Ann Arbor, Harper and Ford Hospitals in Detroit, Blodgett and St. Mary's in Grand Rapids, offers centers that may be utilized for both undergraduate and post-graduate teaching in better diagnostic and treatment methods. The organization of

similar services is being considered in other Michigan hospitals, so that in time improved facilities for diagnosis and treatment will doubtless be available to the majority of residents of the state.

At this time it is felt that efforts should be concentrated on the improvement of diagnostic and treatment facilities in various hospitals throughout the state. When such facilities are available an educational campaign can be directed to the public to inform it of the necessity for early diagnosis and early adequate treatment and where such diagnosis and treatment can be obtained.

To the development of the program outlined above, the American Society for the Control of Cancer is glad to contribute as far as possible. The Society realizes that ways and means must be developed locally by the medical profession and the hospitals for the control of the disease. It will gladly render all practical assistance possible through its state committee, of which Dr. Max Ballin, Detroit, is chairman, and the field representative for the central district. This assistance will consist of advisory service to local groups, the presentation of statistical and other facts bearing on the disease, both in Michigan and nationally, and the supplying of literature and motion picture films on various phases of the subject of cancer control.

In conclusion, I would emphasize the necessity for team work in dealing with cancer problems; for an active interest in the subject by all physicians in order that the control of this problem does not get into other hands; for the continued support of the work of the Cancer Committee of the State Medical Society in its efforts to make the medical profession and the hospitals of Michigan more cognizant of their responsibilities and opportunities in the control of this disease.

VALUE OF LIVER EXTRACT AND IRON IN ANEMIA OF YOUNG INFANTS

SIEGFRIED MAURER, JOSEPH GREENGARD and CESSA KLUVER, Chicago, found it possible to control the anemias of early infancy by administration of liver extract and iron which contains traces of copper. The administration of iron with traces of copper to anemic infants failed to bring about an improvement in blood in about 50 per cent of cases, and liver alone failed in but 37 per cent. The patients in the latter group made significant improvement in blood after iron was added. Also of those infants of the iron series who had failed to make improvements in blood on the iron and copper mix-

ture, those who received liver extract in addition made good gains. Of the infants who showed improvement on either iron or liver extract or on the two together, sometimes before, but always by the time the improvement in blood was apparent, the general condition definitely changed. Appetite improved, the skin became rosier, and normal turgor appeared. In addition, the infants showed definite psychic changes. Irritability disappeared, activity and alertness increased, and rapid gain in weight occurred. In every instance, liver extract was taken well and gastro-intestinal disturbances, such as vomiting or loose stools, were never observed.—*Journal A. M. A.*

THE RÔLE OF AMINO ACIDS IN THE ANIMAL ORGANISM

II. THE PHYSIOLOGY OF THE AMINO ACIDS

BEAUMONT FOUNDATION LECTURE II

HOWARD B. LEWIS, Ph.D.

ANN ARBOR, MICHIGAN

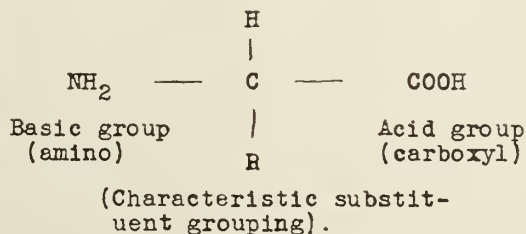
Early in the nineteenth century, Mulder, the Dutch chemist, who in 1839 suggested the term protein for albuminous matter, wrote, "In both plants and animals a substance is contained which is produced within the former, and is imparted through their food to the latter. To both, it uses are numberless. It is one of the most complicated substances, is very changeable in composition under various circumstances, and hence is a source of chemical transformations, especially within the animal body, which cannot even be imagined without it. It is unquestionably the most important of all known substances in the organic kingdom. Without it, no life appears possible on our planet."

"It forms different compounds with sulphur, with phosphorus, or with both—and hence the difference it presents in appearance and physical properties. This substance has received the name of protein, because it is the origin of so many dissimilar bodies, and is itself therefore a primary substance."

Early workers believed that all proteins were similar chemically and that the processes of digestion and metabolism were essentially processes of solution by which those proteins, which were insoluble, entered into solution and thereby were able to be absorbed from the gastro-intestinal canal and circulate in the blood stream to be carried to all the cells of the body. Digestion was thus synonymous with solution. With the discovery of the three enzymes of the digestive tract, pepsin, trypsin, and erepsin, and the realization that the action of these enzymes was one of hydrolysis, a cleavage of the molecule into smaller fragments with the addition of water, such a simple explanation of the phenomena of protein metabolism was no longer tenable. The diversity of the proteins as they existed in nature, not only in their physical properties, but also in the nature of the units comprising the molecule, was soon recognized. Since the proteolytic enzymes are now known to effect an almost complete hydrolysis of protein to its ultimate units, the amino acids, in the alimentary canal, it has become increasingly important to recognize the significance of the liberated amino acids in the processes of metabolism. For the last thirty years, therefore, the study of the intermediary metabolism of proteins has centered first upon their hydrolysis and secondly upon the subsequent metabolism of the constituent amino

acids, of which some twenty or more are now definitely identified as constituents of the protein molecule. The physiology of the proteins has thus become largely a problem of the physiology of the individual amino acids.

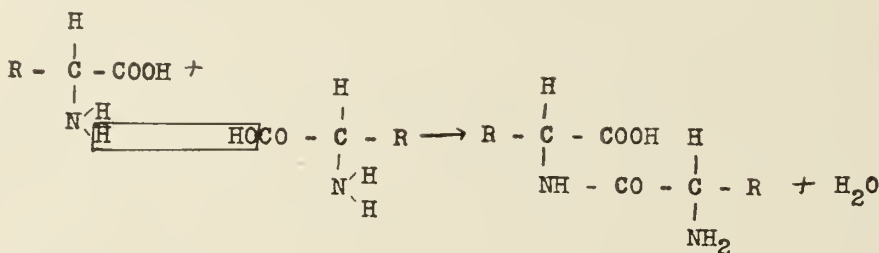
The amino acids in contrast to the large complex colloidal protein molecule are simple diffusible substances of low molecular weight. They contain nitrogen chiefly in the form of primary amine groups, that is, they are substituted derivatives of ammonia and exhibit properties of bases. They are also simple organic acids. They all have in common the primary amine group (NH_2) and the simple grouping characteristic of organic acids (COOH) but each acid is distinctive in regard to the nature of the rest of the molecule. We thus find amino acids containing sulfur (cystine), the benzene nucleus (tyrosine, phenylalanine), the imidazole nucleus (histidine) and many other



groups. Two of these acids may be joined together with the loss of a molecule of water to form a dipeptide, a compound with properties similar to the original amino acids but of greater complexity. Further condensation of many molecules of amino acids in a similar manner results in the production of a very large complex peptide, the protein molecule.

The processes of digestion involve a cleavage of this large peptide to liberate the amino acids. The protein, in the form of these acids, simple diffusible molecules, is

nous fraction of the molecule, split off as ammonia, is rapidly converted into urea under normal conditions and is eliminated in this form by the kidneys. The efficiency of



thus enabled to traverse the intestinal wall, is absorbed into the portal circulation, passes through the liver and enters the systemic blood. The protein material in the form of amino acids is then taken up from the circulating blood by the tissues.

One of three fates awaits each amino acid which thus enters the living cell. The first is condensation with other amino acids, selected by the particular tissue in question from the pabulum supplied to it by the blood, to form the protein characteristic of that particular tissue or cell. This specific synthesis, the converse of digestion, makes possible the maintenance of the individuality of the cell. This process acquires a particular significance in young animals in which building of new tissues, growth, must occur for normal development, and in the adult in normal pregnancy and lactation.

A second fate which may await the amino acid in the cell is utilization for some specific purpose, apart from protein synthesis, in the animal economy. Examples of this are the utilization of specific amino acids for the elaboration of the hormones as insulin or thyroxin, which are amino acid derivatives, for the synthesis of specific catalysts as glutathione, a catalyst for oxidation, and for many other reactions of a similar nature. Some of these will be considered later.

After the needs of the cells for these two purposes have been met, an excess of amino acids may still remain in the cells. The fate of this amino acid fraction is deamination, removal of the nitrogenous portion of the molecule, and oxidation of the non-nitrogenous portion, since in contrast to fat and carbohydrate, no storage of protein or amino acids over any considerable period of time appears to be possible. The nitroge-

ous transformation is demonstrated by the fact that normally systemic blood contains less than 0.1 mg. of ammonia nitrogen per 100 c.c. while the urea content of normal blood calculated as urea nitrogen is approximately 17 mg. per 100 c.c. The non-nitrogenous residue which remains after deamination may either be transformed into glucose and used in this form, the antiketogenic fraction of the protein molecule, or be oxidized directly to carbon dioxide and water, the ketogenic fraction of the protein molecule. Whether the non-nitrogenous residue is oxidized directly to carbon dioxide and water or is converted to glucose for utilization in that form depends upon the chemical structure of the original amino acid. In general we may say that about half of the amino acids present in the molecule of any individual protein may give rise to glucose in intermediary metabolism. A schematic representation of these processes is presented in Figure 1.

Some aspects of these metabolic relationships may now be considered in greater detail.

THE ABSORPTION OF NATIVE PROTEIN IN UNALTERED FORM FROM THE GASTRO-INTESTINAL TRACT

Although digestion studies *in vivo* with experimental animals with fistulas at various levels throughout the alimentary canal have clearly demonstrated that the major portion of the ingested protein is completely hydrolyzed to amino acids or at least to very simple peptides, the question of the absorption of some portion of the protein of the diet in unaltered form into the circulation must be considered. It is hardly necessary to discuss in detail the importance of this problem; apart from its interest from the

standpoint of the digestion, absorption and metabolism of the proteins, it bears a close relationship in its practical aspects to pathology, immunology, and dermatology.

it, "The regularity with which the phenomenon occurs in the average individual and the uniformity of results when repeatedly tried under identical conditions on the same sub-

Schematic Representation of Reactions Involved in

Protein Metabolism

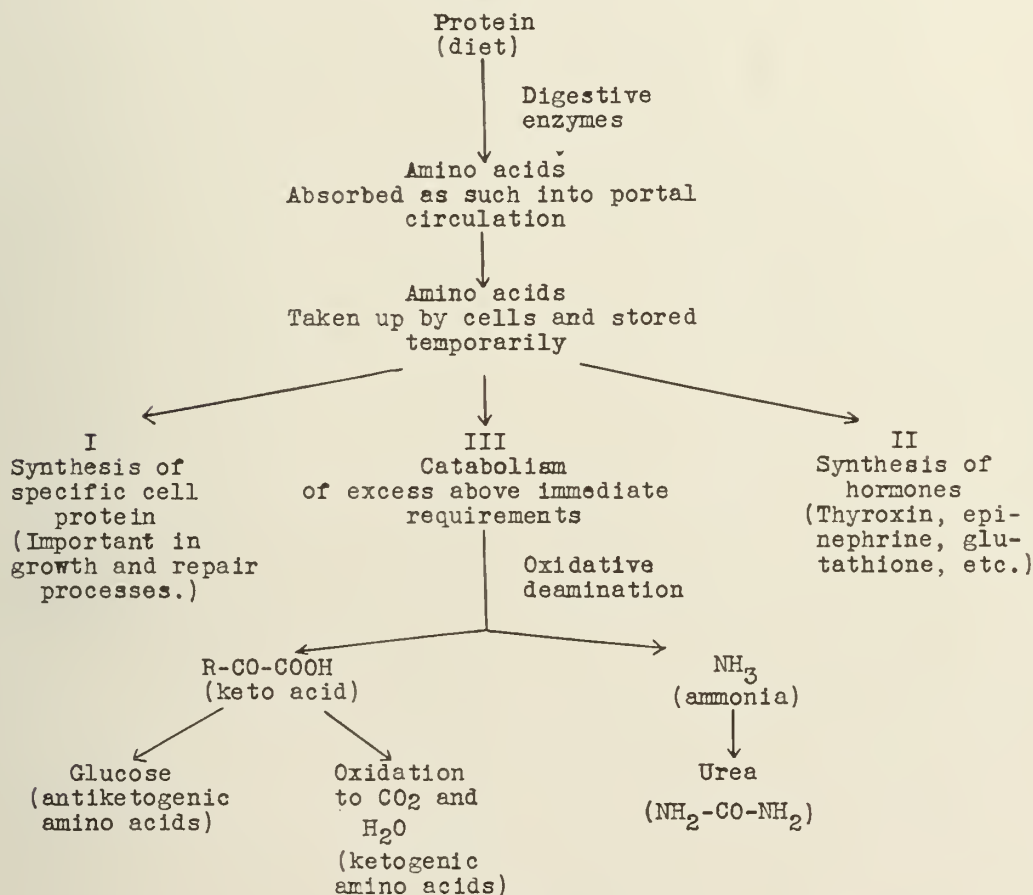


Figure 1.

Early workers whose experimental methods were not adequate, were led to favor the possibility of such an absorption under *unusual* circumstances, particularly in young animals, in which the intestinal membrane was assumed to be more readily permeable. The use of the newer methods of immunology, by which accurate detection and differentiation of very small amounts of specific proteins have been made possible, has thrown new light on the question. By these methods, it now appears to have been demonstrated that in most individuals, without regard to age or sex, a detectable amount of certain proteins *frequently* enters the blood stream in an unaltered state via the alimentary canal. As Walzer has expressed

ject, preclude the possibility that this is an accidental or unusual occurrence." Of the protein foods studied, the most extensive observations have been reported with egg white. Some data are also available which indicate that the proteins of the diet may appear in very small amounts in the milk, in some individuals at least. These findings are of special significance in relation to the phenomena of sensitization to specific protein foods. However, it should be remembered that the methods of immunology are capable of detecting exceedingly minute amounts of protein and that the total amount of protein absorbed thus unaltered must be very slight. We may, then, with a reasonable degree of confidence look to the

behavior of the individual amino acids for the interpretation of normal protein physiology.

THE ESSENTIAL AMINO ACIDS

It had been recognized for years that proteins as they existed in nature were not all equal in value as regards their more important physiological rôles as structural units in the cell or as regulators of various physiological processes. With the recognition of the nature of the protein as a complex of a large number of units, the amino acids, a clearer understanding of the factors which determined this biological value of protein became possible. Mendel in his "Nutrition, the Chemistry of Life," has ably summarized the change in the viewpoint.

"Today we are concerned with the question whether this or that protein, whatever its biologic origin, will yield the characteristic desired amino-acids, such as tyrosine and tryptophane, leucine and lysine, glycocoll and cystine, histidine and arginine. Our attention is fixed on the building-stones or units out of which the great protein structures are put together. Instead of referring to the proteins in terms of their physical properties or empirical composition—their content of carbon, hydrogen, oxygen, nitrogen or sulphur—at least so far as the problems of nutrition are involved, the time has arrived for estimating their behavior in the organism on the basis of the quota of each of about eighteen well-defined amino-acids which the individual representatives of this group of foodstuffs can yield. Many, if not all, of these amino-acids are essential for the construction of tissue and the regeneration of cellular losses. In proportion as any specific protein can furnish these constructive units it may satisfy the nutritive needs of the body. The efficiency of the individual protein in this respect must depend on the minimum of any indispensable amino-acid that it will yield; for it is now known that some of them cannot be synthesized anew by the animal organism. If, for example, a protein or mixture of proteins comparatively deficient in their yield of the sulphur-containing amino-acid cystine be furnished alone to supply the body's nitrogenous requirements, the production of new, cystine-yielding molecules of protein will be limited by the amount which is available in the diet. An excess need not be wasted, for it can be burned up like sugar or fat to pro-

vide energy; but new construction or growth is limited by the minimum of the essential unit" (pg. 116).

Which of these units are indispensable? What are the essential amino acids? The complete answers to these questions are still to be obtained. Of the 20 amino acids known to be present in proteins, only four, lysine, histidine, tryptophane and cystine, have been definitely proven to be indispensable components of the diet, in the absence of which normal nutrition is impossible. The importance of some of the others, glycine, arginine, tyrosine, proline and hydroxyproline, glutamic, hydroxyglutamic and aspartic acids, is uncertain; the experimental data indicate that some of these, as glycine and glutamic acid, are probably not essential units. The remaining known amino acids of the protein molecule, alanine, serine, valine, the three isomeric leucines, phenylalanine and the recently discovered methionine, have not as yet been carefully studied experimentally and their rôle is unknown.

It has long been known that the mixture obtained by complete hydrolysis of a protein of good quality to its constituent amino acids may be as adequate in supplying the body's requirements for protein as is the unhydrolyzed protein. Is it possible to secure the same satisfactory results with mixtures of purified amino acids, mixed in proportions to simulate the composition of some natural protein of superior quality? Studies of this type have been attempted in a few instances only and results have hitherto not been striking. In a notable study, Rose and his coworkers at the University of Illinois have recently fed young white rats with diets in which protein has been replaced by highly purified amino acids (*J. Biol. Chem.*, 94, 155, 167, 173 (1931-2)). Rats which received these diets lost weight rapidly during the first 12 days and then declined gradually or maintained weight to the end of the experiment. When 5 per cent of casein, gliadin or gelatin replaced an equivalent amount of the amino acid mixture, the animals lost less rapidly in the initial days of the experiment and then slowly gained. Casein was more effective than either of the other two proteins added as supplements. These experiments led to the conclusion that growth-promoting proteins must contain at least one essential other than the amino acids at present recognized as constituents

of the protein molecule. Still more striking gains in weight were obtained when the fraction extracted from hydrolyzed casein by butyl alcohol was substituted for 5 per cent of the amino acid mixture. If the nature of this unknown growth-stimulating constituent of the protein molecule can be determined, it should then be possible to secure normal growth with the protein element entirely replaced by a mixture of synthetic chemical compounds, the amino acids. With the successful promotion of growth by synthetic mixtures in this manner, it will then be possible to determine with certainty which of the known amino acids are essential for life. The whole problem of the significance of the individual amino acids in nutrition must be investigated anew.

What is the function of these essential amino acids? What is the occasion for this necessity of a constant supply of protein from the diet? In growth, the answer is a simple one. In the growing organism, new cellular material, new protoplasm, is constantly being constructed and to insure a continuance of this process an ample supply of the building stones, the amino acids, must be furnished by the food. The complete degradation of the protein molecule in digestion makes possible the presentation of a wide variety of building stones to the cells and thus each tissue is enabled to select those amino acids for resynthesis to protein, which will result in the formation of the particular protein, characteristic of that tissue and of the species. The individuality of the tissue proteins is thus maintained despite the ingestion of food proteins of widely differing chemical composition and origin.

In adult life, the function of protein is more difficult to explain, since in the adult new cellular protoplasm is not formed extensively. Formerly frequent reference was made to the "wear-and-tear" quota of protein required for maintenance, a simile drawn from the supposed resemblance of the protein of the cells to the framework of a machine, which might be expected to call for repairs and replacements. This conception appears incorrect in the light of our present knowledge of protein metabolism. The tendency is to think of the protein requirement of the adult organism as a means of furnishing certain amino acids as precursors of hormones or other substances essential for the proper regulation of the reactions of tissues. Thus thyroxin bears a close

chemical relationship to tyrosine as does also epinephrine. Insulin appears to be a relatively simple peptide which contains a number of the more common and important amino acids, notably cystine. Creatine, which is intimately related to the maintenance of the tonicity of muscle, is a derivative of guanidine, a chemical group which is found also in the amino acid arginine. Glutathione, a tripeptide, which is composed of one molecule each of glutamic acid, cysteine, and glycine, is considered to have an important rôle in the regulation of normal oxidative processes in the organism. These and many other nitrogenous compounds, related to or derivable from amino acids, are concerned with the maintenance of the normal metabolic processes of the tissues. If the amino acids from which these substances are derived are not furnished by the diet, it seems probable that the protein of the less essential tissues is broken down to furnish the precursors of these regulatory substances. If the protein of the diet supplies these necessary amino acids in adequate amounts, we may assume that the integrity of the tissue proteins is maintained. This explanation of the function of protein in the adult organism, while not entirely satisfactory, appears to be more in harmony with the present-day conception of the physiology of the amino acids than the older conception of the "wear-and-tear" or "replacement" quota of Rubner. Successful completion of the experiments of Rose, if they afford a means of securing normal nutrition of laboratory animals on mixtures of pure amino acids as the source of nitrogen, will make possible the direct experimental testing of this theory. For example, it should then be possible to eliminate completely tyrosine and phenylalanine from the diet and to study experimentally the effect on the production of epinephrine or thyroxin as well as the effects of such amino acid deficiency on the processes of growth and the function of adrenals or thyroids.

THE FORMATION OF UREA FROM AMINO ACIDS

Those amino acids taken up by the cells from the blood stream, which are not required for synthesis of new protein or as precursors of hormones and related substances, are rapidly deaminized and the nitrogen excreted as urea or ammonia. Except under conditions where the amino acid

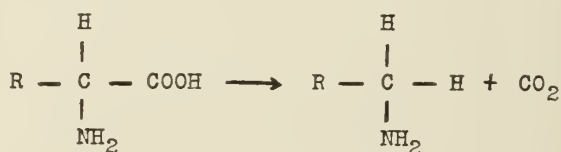
requirements for synthesis of body protein are great, as in young animals, by far the greater part of the nitrogen of the absorbed amino acids appears to be converted to urea. Much research has been concerned with the problem of the site of this transformation of the nitrogenous waste products of metabolism to urea. Two answers have been suggested. The wide distribution of urea in nature from the lowest to the highest form of animal life has suggested that its formation must be one of the more fundamental processes of metabolism and thus be a property of all cells. This consideration has led Folin and others to the view that deaminization and urea formation occur in all body cells, in all tissues where amino acids are presented for catabolism. However, anatomical considerations have suggested another point of view. The fact that absorbed products of protein digestion must pass via the portal circulation through the liver, the largest glandular organ of the body, before entering the general circulation has led Van Slyke, Mann and others to believe that the liver has a specific rôle in urea formation. The best experimental evidence in support of this view has been obtained by Mann of the Mayo Clinic in studies of hepatectomized dogs. In these animals, there was observed a marked and progressive decrease in the urea content of the blood and tissues which was accompanied by a similar decrease in the urinary urea. In the dehepatized dog, there was also a failure of the normal process of deaminization, as evidenced by an accumulation of amino acid nitrogen in the blood, comparable in amount to the nitrogen converted to urea by the normal fasting animal. It may then be stated definitely that, in the dog, deamination of amino acids and synthesis of urea are directly dependent upon the presence of the liver. Whether this predominance of the liver in amino acid metabolism also holds for species other than the dog is open to question. It seems probable that deamination and formation of urea in man may occur in all tissues, but that in the liver, as the largest glandular organ, the processes are of particular significance quantitatively.

Studies of liver function under conditions of hepatic disease or experimentally in acute poisoning of the liver (chloroform, phosphorus, etc.), have not shown the marked deviations from the normal formation of urea to be anticipated if the liver were the

only organ concerned in urea formation. It has been suggested that, if the liver were put under an increased strain by the administration of amino acids in relatively large amounts, differences in metabolism might be observed to result from even moderate degrees of liver injury. There has been, however, no agreement concerning the value of such tests of liver function and much more careful study is necessary before the value of such tests as diagnostic procedures can be determined.

THE SYMPATHOMIMETIC AMINES— HISTAMINE

Another chemical reaction of amino acids demonstrated to occur in the animal organism is decarboxylation, a process by which carbon dioxide is split off and a primary amine is formed.



The formation of amines from amino acids was shown to occur in the intestine as a result of the activities of the intestinal flora, but the extent of the reaction and the physiological significance of the products formed have not been clearly established. Of the amines formed, histamine, derived from histidine, is the most active. Other amino acids than histidine produce physiologically active amines by decarboxylation, but none of these (*e.g.*, tyramine, cadaverine, etc.) approach histamine in pharmacological activity. Histamine is one of the most powerful depressor and oxytocic substances known. It has also been demonstrated that histamine is a powerful stimulant to the secretion of gastric juice when administered orally or parenterally in small doses.

The earlier work of Koessler and Hanke indicated that any histamine absorbed from the intestine was rapidly detoxicated by the liver and that little, if any, of this very active substance entered the general circulation. Recently, however, histamine has been obtained by simple methods of extraction from a considerable number of fresh normal tissues, an isolation and general occurrence which is an important link in a chain of evidence which may lead to the establishment

of a *physiological* rôle for this powerful amine. Its general occurrence and the effect on blood pressure, on contraction of smooth muscle and on capillaries suggest that it may perhaps be classed as a hormone. Earlier work had been directed primarily to a demonstration of the relation of histamine to certain *pathological phenomena*, secondary wound shock, anaphylactic shock and intestinal obstruction. Best in a recent review has summarized the evidence in favor of a physiological rôle (Best, C. H., *Physiol Rev.*, 11, 371 (1931)). "There is, however, at present, no conclusive evidence that histamine is the causative agent in any pathological condition. While there is no indication that interest in this aspect of the subject is decreasing, the results of recent researches have drawn attention to the possibility that the amine may possess physiological significance."

"A number of points provide interesting but indirect evidence in favor of this possibility. The presence of a histamine-like vasodilator material in human skin and the ease with which it can be released by mechanical stimulation or by nerve impulses, and the liberation of sufficient of this material in certain human subjects to cause flushing of the face, secretion of gastric juice, or lowering of blood pressure similar to that produced by the subcutaneous injection of histamine, are suggestive points. The fact that many physiological processes are affected in opposite directions by histamine and epinephrine, together with the evidence that liberation of epinephrine from the adrenal glands is caused by injection of histamine, suggest that these substances may be physiological antagonists, while the demonstration of what appears to be a specific enzyme system for the inactivation of the amine indicates that a slower acting protective mechanism may also be available. The

presence of relatively large amounts of histamine in the lungs of certain species is undoubtedly of physiological significance, but attempts to determine what this significance is have not yet succeeded. The evidence that the production of local effects seems to be the most important function of the histamine-like substance suggests that it is only liberated in quantities which are chemically very minute. If this is true, it will be very difficult to establish whether or not the amount of the substance in a tissue varies under physiological conditions."

If it is established that histamine has an activity beneficial to the organism, the question of the site of its formation is raised. It seems hardly possible that a substance of direct physiological importance for the maintenance of normal conditions in the body would arise from the activity of microorganisms of the intestine, an activity which in general can hardly be considered as advantageous to the system. It appears more probable that the reaction of decarboxylation may occur to a slight extent in the tissues themselves to form this physiologically important substance. In harmony with this view is the recent demonstration of a specific enzyme capable of the destruction of histamine, whose function would seem to be to act as a check on any over-production or accumulation of histamine.

It should also be pointed out that while recent investigation has centered around the occurrence and activity of histamine, the most active of these biogenous amines, it is by no means impossible that amines derived from other amino acids, *i.e.*, tyramine, with similar although less marked physiological action, will be demonstrated to occur in normal tissues and to play a rôle in normal body reactions. Further developments in this field of research are likely to prove of great importance in the near future.

EXPERIENCES WITH PERIARTERIAL SYMPATHECTOMY IN FRACTURES OF THE LOWER EXTREMITY

Ralph Colp and Sigmund Mage call attention to the fact that periarterial sympathectomy seems to have a physiologic basis for application in the problem of fracture repair. In a series of seven recent fractures of the lower extremity there was a diminution of time in obtaining clinical union of eleven

days and in hospitalization of nineteen days, and no case showed a tendency toward delayed union. In a series of ten cases of delayed union in fractures of the lower extremity which were ununited after an average of seventy days, clinical union resulted twenty-one days after sympathectomy in eight cases. The experimental and clinical evidence seems to justify a further trial of this operation in recent fractures and in those in which union appears to be delayed.—*Journal A. M. A.*

SERVICE FOR THE AMBULATORY DIABETIC

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DETROIT, MICHIGAN

This is a survey of the service given to ambulatory diabetics by the Department of Metabolism of the North End Clinic for the last four and one-half years. Part I is a survey of our experiences in the operation of a diet kitchen for the feeding and instruction of metabolic patients. Part II is an analysis of the end-results of our medical service to ambulatory cases that have been referred for diabetes mellitus.

PART I. SERVICE IN THE DIET KITCHEN

The metabolic kitchen was opened to facilitate our study of metabolic cases and to render a much needed service to patients requiring dietary management and instruction. Here the patients can obtain their own individual calculated and weighed diets, together with a carefully organized and graded course in dietetic management.

The dietetic instruction is given by graduate dietitians. Group instruction is given in so far as this is possible, but much individual instruction is necessary to meet the requirements of individual cases. The most unique feature in this arrangement is that the patient can receive his individual diet, learn the fundamentals of his disease and its dietary management, and still continue with his work. He is given all the advantages of hospitalization, except rest in bed, without losing any time from his job. These facilities are available not only to the clinic patients, but also to private patients sent in by physicians who wish to procure for their patients accurate dietary control and instruction without the increased cost and loss of time incident to hospitalization.

The kitchen was opened for the purpose of giving both practical and theoretic dietary instruction. The creation of a service of this type in a metropolitan center for the service of the working classes was more or less experimental, and there was no beaten path to follow. Primary interest from the very first has been focused around the scientific study of the cases. The average period of feeding and instruction has been from two to three weeks. However, there have been some cases where the home surroundings did not permit of accurate dietetic management, and these cases have

been taken into the kitchen as boarders. In the first few weeks the kitchen was in operation we learned considerable, not only about diabetes but also about human nature. At first the rates were very flexible and varied from pure charity to a fee of \$17.50 per week. It was soon observed that those who paid for their food gave better coöperation and progressed much more rapidly than those who got their board for nothing. Admissions to the kitchen were not made for any definite period but it was understood that the patients could stay until they had learned to manage their diet. Under this system it was to the financial advantage of the patient to remain in ignorance as long as possible. The free cases were always the last to leave the kitchen, and the first to apply for readmission. In fact it was soon learned that some of these patients broke their diets deliberately and induced ketosis so that they would be readmitted to free board. It was also discovered that those of ample means were dissatisfied to pay the higher rates for a service that was given to their associates for little or nothing.

At first the patients were allowed to pay when they left the kitchen; we very shortly discovered that this was also an error for some stayed as long as possible and then left without settling their bill. These abuses were soon corrected. A definite weekly rate of \$8.75 for clinic and \$17.50 for private patients was established. Only patients who had a real need for the service were admitted to the kitchen. As these policies were gradually evolved the attendance in the kitchen was somewhat reduced, coöperation was improved and the average stay in the kitchen for each admission has

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decreased with each succeeding year. This study extending from 1927 to 1931 covers the peak of a boom and the bottom of a depression. This circumstance has had a pronounced effect upon the attendance in our kitchen in the last two years. There are many now who need the service and cannot afford it. Only the most pressing cases are being admitted as charges of the public Welfare, and the Jewish Social Service. This service can be given now at one-half the cost of the cheapest type of hospitalization.

The following tables give an arithmetical

the kitchen has been decreased gradually, during this time the teaching service has been improved and we are now able to accomplish the desired results in about one half the time that we could in 1927, while the charge for this service is only 42 per cent of that charged in 1927. A total of 234 metabolic patients made a total of 326 admissions to the diet kitchen. A total of 24,033 meals was served during this period, for a charge of \$10,594.06, or an average charge of \$.44 per meal. The average raw food cost per tray during this time was \$0.458. Except for the two years when

TABLE 1

TOTAL ATTENDANCE IN DIET KITCHEN YEAR BY YEAR

	1927	1928	1929*	1930*	1931* (6 mo.)
Total Patients in Diet Kitchen, New and Old					
Number of individuals	61	71	51	46	23
Number of admissions	82	87	58	47	23
Number of days	2,261	2,496	1,242	987	333
Average number of days per individual.....	37	35	24	21	14
Average number of days per admission.....	28	29	21	21	14
Income from patients.....	\$2,928.72	\$3,096.23	\$1,709.11	\$1,526.25	\$ 468.75
Income per individual.....	48.01	43.61	33.51	33.18	20.38
Admissions paid by patients.....	74	75	50	38	17
Admissions paid by organizations.....	0	8	9	10	7
Admissions paid by both.....	0	0	1	0	0
Unknown	8	4	0	0	0

*This chart does not include one patient who was in the kitchen continuously from August 8, 1929, to June 30, 1931.

TABLE 2

NEW PATIENTS ATTENDANCE IN YEAR OF ADMISSION

	1927	1928	1929*	1930*	1931*
Number of individuals	61	57	37	27	16
Number of admissions	82	69	44	28	16
Number of days	2,261	1,781	964	530	248
Average number of days per individual.....	37	31	26	20	16
Average number of days per admission.....	28	26	22	19	16

TABLE 3

READMISSIONS IN ALL YEARS

	1927	1928	1929*	1930*	1931*
Old Patients					
Number of individuals	0	14	15	19	7
Number of admissions	0	18	16	19	7
Number of days	0	715	424	457	85
Average number of days per admission.....	0	40	27	24	12

*This chart does include one patient who was in diet kitchen continuously from August 8, 1929, to June 30, 1931.

picture of the service given in the kitchen in the last four and one-half years.

The total attendance in the kitchen is made up of new patients as shown in Table 2, and of readmissions as shown in Table 3.

It will be noted that the average stay in

food costs were greatest the income from the patients more than covered the cost of the food. However, there should be a daily average of 8 to 10 patients at the rate of \$1.25 per day per patient in order to meet the total cost of the kitchen.

PART II. ANALYSIS OF END-RESULTS IN CASES
INVESTIGATED FOR DIABETES MELLITUS

From November, 1926, to June 30, 1931, a total of 248 patients have been referred for the diagnosis and treatment of metabolic disturbances.

3 cases were referred for diet instruction only.

11 cases were referred for the study of thyroid dysfunction.

12 cases were referred for the treatment of obesity.

222 cases were referred for the diagnosis and treatment of diabetes.

Some of the private cases had only diet kitchen records and for this reason a survey of the medical service rendered concerns itself chiefly with clinic cases. The charts

218 Patients Admitted for Diabetes.

Clinic patients	201
Private patients	17
White	206
Colored	12
Male	80
Female	138

184 Cases of Diabetes.

Diet and Insulin.....	70, or 38 per cent
Diet only	114, or 62 per cent

Family History. A family history of diabetes was obtained in 18 cases, or 9 per cent of those diagnosed diabetes.

CLASSIFICATION OF 184 CASES ACCORDING TO AGE OF ADMISSION

Young (under age 30).....	22 cases, or 12 per cent
Middle Age (between 30 and 50 years).....	88 cases, or 48 per cent
Old (over 50 years).....	74 cases, or 40 per cent

88 per cent of the cases diagnosed diabetes were over age 30 on admission

CLASSIFICATION OF 184 CASES ACCORDING TO C. H. O. TOLERANCE

Mild diabetes mellitus.....	80 cases, or 43.5 per cent
Moderately severe diabetes mellitus.....	81 cases, or 44.0 per cent
Severe diabetes mellitus.....	23 cases, or 12.5 per cent

The 184 cases were classified as mild, moderately severe, or severe according to whether they could tolerate 150, 100 or 50 gms. of carbohydrate, with 1.5 gms. of fat per kilo and enough protein to establish nitrogen balance and assure proper growth and development.

CLASSIFICATION OF 125 CASES ACCORDING TO DURATION OF DIABETES

1 month to 2 years.....	46 cases, or 36.8 per cent
2 years to 5 years.....	31 cases, or 24.8 per cent
5 years to 16 years.....	48 cases, or 39.4 per cent

There was 1 case of 15 years', and 1 case of 16 years' duration. In the remaining 59 cases the onset had been so gradual that it could not be determined.

PATIENTS TAKING INSULIN (70 cases, or 38 per cent)

Age	Same Insulin	Increased Insulin	Decreased Insulin	Stopped Insulin	Total by Age
	Same Diet	Same Diet	Same Diet	Same Diet	
Young, under 30.....	2(20%)	4(40%)	4(40%)	0	10(45.5%)
Middle aged, 30/50.....	8(26.5%)	11(36.5%)	6(20%)	5(17%)	30(34%)
Old, over 50.....	7(23.3%)	12(40%)	10(33.3%)	1(3.4%)	30(40%)
Total by tolerance.....	17(24.5%)	27(38.5%)	20(28.6%)	6(8.6%)	70

of 218 patients referred to the department of metabolism for diagnosis and management of diabetes were analyzed and are presented here.

Of the 218 patients referred for diabetes, 184 cases, or 84 per cent, were found to have diabetes. Of the 34 patients who did not have diabetes 19, or 56 per cent, were diagnosed as renal glycosuria, 3 cases, or 9 per cent, were lactating mothers, while 12 cases, or 35 per cent, showed transient glycosuria of undetermined origin.

In this last group of cases both hyper- and hypoglycemia were frequently present. The glucose tolerance curves were very atypical and as yet we have not been able to put them into any definite classification. A special study is now being made of these cases. The diagnosis of renal glycosuria was made only in those cases that showed a persistent glycosuria with a normal blood sugar irrespective of diet or insulin.

Diagnosed diabetes mellitus.....	184
Renal glycosuria	19
Lactating mothers	3
Unclassified glycosuria.....	12

70 Patients Taking Insulin.

Insulin reactions	18, or 26 per cent
No reactions	52, or 74 per cent

As shown in the above chart, 17, or 24.5 per cent, of the 70 patients who took insulin remained on the originally established dose of insulin; 27, or 38.5 per cent, had to have

their insulin increased on the same diet; 20, or 28.6 per cent, had their insulin reduced on the same diet, while 6, or 8.6 per cent, were able to discontinue insulin while taking the same or a better diet. Of the 70 patients taking insulin, 10 were young, 30 were middle aged, and 30 were old. In other words in this series 45.5 per cent of all the diabetics under the age of 30 years were given insulin, 34 per cent of those between 30 and 50 years were given insulin, and 40 per cent of all those over 50 years were given insulin.

It has been our experience that the elderly Jewish diabetic does not coöperate well. This group of patients are not conscientious with their diet so we have attempted to give them such a liberal diet that they will have little inclination to break it. This type of treatment makes insulin necessary in a larger percentage of the cases. We also use insulin in these elderly cases for the treatment of complications.

Of the 17 cases who remained on the originally established dose of insulin 2 were young, 8 were middle aged, and 7 were old. Of the 27 cases who had to have their insulin increased 4 were young, 11 were middle aged, and 12 were old. These last mentioned 12 cases form the majority of our worst offenders in regard to the regulation of the diet.

Of the 20 cases who had their insulin reduced on the same diet, 4 were young, 6 were middle aged and 10 were old. Of the 6 cases who were able to stop insulin and remain on the same or a better diet, none were young, 5 were middle aged and 1 was old. Of the 10 young diabetics on insulin, 2, or 20 per cent, remained on the originally established dose of insulin; 4, or 40 per cent, had to have the insulin increased; and 4, or 40 per cent, were able to have insulin reduced on the same diet. Of the 30 middle-aged diabetics on insulin, 8, or 26.5 per cent, remained on the originally established dose of insulin; 11, or 36.5 per cent, had to have their insulin increased; 6, or 20 per cent, were able to decrease their insulin; and 5, or 17 per cent, were able to stop insulin while taking the same or a better diet. Of the 30 elderly diabetics on insulin, 7, or 23.3 per cent, were able to remain on the originally established dose of insulin; 12, or 40 per cent, had to have their insulin increased; 20, or 28.6 per cent, were able to decrease their insulin; and 1, or 3.4 per cent, was able to stop insulin on the same or a better

diet. The one elderly diabetic who was able to stop insulin and take a better diet has always given excellent coöperation, and has been a constant boarder in the kitchen since August 8, 1929. This case will be reported in detail later by Dr. I. H. Friedman.

X-RAY STUDIES

152 X-ray examinations were made on the 218 patients referred for diabetes as follows: Bones 55. Chest 36. Gastro-intestinal 21. Gall bladder 21. Teeth 19.

REFERS TO OTHER DEPARTMENTS

The 218 patients were given a total of 391 refers to the different departments as follows: Dentist 73. Surgery 62. Eye 61. Dermatology 43. Ear, Nose and Throat 38. Physiotherapy 36. Gyn. 24. Psychiatry 17. G. U. 13. Cardiology 13. G. I. 11.

COMPLICATIONS

The 218 patients presented 580 complications, as follows:

1. Obesity	83
2. Hypertension	76
3. Dental Caries	73
4. G. I. and G. B.	53
5. Arteriosclerosis	46
6. Pyogenic Inf.	42
7. Rheumatism and Neuritis	40
8. Infected Tonsils	34
9. Varicose Veins	25
10. Respiratory Inf. not Tbc	19
11. Ketosis	15
12. Cataract	15
13. Heart Disease	14
14. Thyroid Disease	12
15. Menopause	10
16. Syphilis	10
17. Gangrene	9
18. Nephritis	6
19. Pulmonary Tbc	3
20. Ca. of Pancreas	1

The younger patients had few complications, the older patients, and especially those who had not been under proper management, had many complications.

DIAGNOSIS

An attempt was made to make an etiological diagnosis in each case according to the underlying complications and the response to treatment. Our diagnosis in these 184 cases was as follows:

72 cases, or 39.2 per cent, had diabetes due primarily to obesity.
46 cases, or 25 per cent, had diabetes due primarily to arteriosclerosis.
40 cases, or 21.8 per cent, had diabetes due primarily to pancreatic insufficiency.
10 cases, or 5.4 per cent, had diabetes due primarily to cholecystitis and pancreatitis.
8 cases, or 4.3 per cent, had diabetes due primarily to syphilis.
5 cases, or 2.7 per cent, had diabetes due primarily to thyroid disease
3 cases, or 1.6 per cent, had diabetes due primarily to pregnancy.

A diagnosis of diabetes due primarily to obesity was made in those cases that showed a definite gain in tolerance on a reduction to

normal weight. There were 10 obese patients in which obesity was not thought to be the most important factor in the etiology.

A diagnosis of diabetes due primarily to arteriosclerosis was made in 46 cases. These cases were all mild elderly diabetics whose diabetes came on in the later years of life, who had very definite sclerosis of the vessels and whose only other complications were those due to arteriosclerosis.

A diagnosis of diabetes due primarily to pancreatic insufficiency (hypoinsulinism) was made in 40 cases. This is something like saying idiopathic diabetes, or in other words, we were not able to determine the causative factor in these cases. Nervous and mental strain appeared to have a definite bearing on many of them.

A diagnosis of diabetes due primarily to cholecystitis and pancreatitis was made in 10 cases. There was marked improvement in carbohydrate tolerance following treatment of biliary tract infection. Four of the cases had stones and were treated surgically, the other six were not operated, but cleared up under medical treatment. It is possible that many obese diabetics have unrecognized biliary tract infections that clear up on a reduction diet.

A diagnosis of diabetes due primarily to syphilis was made in 8 cases. These were all cases who had had syphilis for several years before the diabetes developed and who showed a marked gain in tolerance on anti-luetic treatment.

A diagnosis of diabetes due primarily to hyperthyroidism was made in 5 cases. In all these cases the basal metabolic rate was considerably elevated. In 3 of these cases there was improvement in carbohydrate tolerance following thyroidectomy, and in one of the 3 cases the patient was able to take a full diet. In the other 2 cases there was improvement in the diabetes following medical treatment of the hyperthyroidism.

A diagnosis of diabetes due primarily to pregnancy was made in 3 cases. In each of these cases the diabetes came on during pregnancy and in 2 cases cleared up following delivery. There has been no return of the diabetes in from 6 months to 3 years in these 2 cases.

DISPOSITION OF THE CASES

Seventy-nine, or 42.9 per cent, of these cases are still under active treatment in the clinic. Fifty-seven, or 30.8 per cent, are un-

der treatment elsewhere. This includes cases that have been referred for private care, those who are attending other clinics, and those who have left the city.

Forty-one, or 22.5 per cent of these cases were discharged due to lack of coöperation. We feel that it is useless to spend time and money trying to help people who will make no effort to help themselves.

Seven, or 3.8 per cent, of these cases are deceased.

CAUSE OF DEATH

Gangrene 2. Coma 2. Apoplexy 1. Ca. of pancreas 1. Senility 1. The patients who died in coma were both elderly hypertensive arteriosclerotic diabetics who had never given good coöperation. They were taken to the hospital in coma. One of these cases was operated for cancer of uterus ten years previously. There was no autopsy. The case of senility was an arteriosclerotic diabetic, age 75 years. The case of carcinoma of the pancreas was demonstrated by exploratory laparotomy.

All of these seven deaths occurred in arteriosclerotic diabetics over 50 years of age. All of these patients were predisposed to death. It would not be fair to say that the diabetes was more than a predisposing cause in any except the 2 cases who died in coma. However, under our present system of recording deaths, diabetes is given a prominent place as the cause of death in all these cases. This is obviously an error and gives the impression that the death rate from diabetes is higher than it actually is.

CONCLUSIONS

There is a need for diet kitchen service for ambulatory patients. Under the present conditions in our kitchen 8 to 10 patients at a charge of \$8.75 per week will completely cover all expenses. In our group of cases diabetes is definitely a disease of middle and later life.

One hundred sixty-one cases were mild or moderate, while only 23 cases were severe. Sixty-four per cent of the cases had had diabetes for more than 2 years before coming under our observation.

The response to diet and insulin depends upon the etiological factors involved and to an equal degree upon the coöperation of the patient. Obesity, hypertension and dental caries are the leading complications of diabetes in this series of cases. Young dia-

betics show fewer complications than the elderly group, where the diabetes itself may often be considered a complication of arteriosclerosis. Obesity and arteriosclerosis are considered the most important etiological factors in this series.

This death rate of 3.8 per cent (7 cases) does not apply to the whole 184 cases for 4.5 years. It applies to 79 cases for 4.5 years and to 105 cases for a period from 2 weeks to 4.5 years. There were no deaths

in the young and middle-aged group in this series. All of the 7 deaths occurred in elderly arteriosclerotics in which the diabetes was a complication. In only 2 of these cases was diabetes an important contributory factor.

A diabetic must some day die of something, and just as surely as this is going to happen the death will be charged to diabetes mellitus.

224 BLVD. TEMPLE BLDG.

RETINAL TEARS AT THE ORA SERRATA*

PETER C. KRONFELD, M.D.†

CHICAGO, ILLINOIS

Looking critically at the ophthalmological world since the day *Gonin* published his first results with the ignipuncture, one can not help noticing a certain degree of confusion which in itself proves the greatness of *Gonin's* discovery, as history shows that every great discovery has thrown the world into confusion. If we try to analyze its causes we shall readily make the conclusion that it is the inconsistency of the results which is so upsetting to many ophthalmologists. The causes for the inconsistency are bound to be inadequacy of the particular case and inadequacy of the surgical technic. These are the two points which were discussed at almost every meeting during the last four years and in numerous publications.

Although many of us agree that the *Gonin* operation is the method of choice in many types of retinal detachment, we all know that some cases of retinal detachment do better or would have done better without the ignipuncture. Many of us have had this unfortunate experience which consisted either¹ in sudden loss of macular vision where it had been normal before the operation, or² in a rapid progression of the retinal detachment immediately after the operation. A third possibility is the occurrence of severe intraocular hemorrhages immediately after the ignipuncture or a week later.

These are the reasons why German authors (*Axenfeld*, *Elschnig*, *Wessely*) especially are stressing the point that certain cases of retinal detachment do fairly well without surgical interference. It is well known that a partial detachment may form firm chorioretinitic adhesions at its boundaries, the *striæ retinales*, which will prevent a

further extension of the detachment and my ultimately lead to its complete spontaneous reattachment. This type of retinal separation is rare, as we all have experienced, but it occurs, should be recognized as such, and left alone. It requires at least a period of several weeks before this natural tendency of a detachment to heal can be detected. If after a few weeks the detachment has not shown any signs of improvement, the unanimous opinion usually is to operate. If a retinal tear is visible, the *Gonin* operation is probably the procedure which most of us would resort to. In *Gonin's* publications it is made very clear that the duration of a retinal detachment is one of the most important factors which determine the prognosis of the disease. The period of observation, therefore, must be reduced to a minimum and we should learn the art of prophecy in order to be able to tell how a particular case of retinal detachment is going to behave. Since retinal detachment is only a certain type of pathological response to many different causes and not a pathological entity, we should attempt a classification of the various sorts of detachment. *Gonin* deserves the world's gratitude for having drawn our attention to an almost forgotten

*From the Eye Clinic of the University of Chicago, Dr. E. V. L. Brown, Director. Read before the section on ophthalmology, 111th annual meeting of the Michigan State Medical Society, at Pontiac, September 23, 1931.

†Dr. Peter C. Kronfeld is a graduate of the University of Vienna, Austria, 1923. He was Assistant at the first University Eye Clinic in Vienna, 1924-1929; Assistant Professor University of Chicago, 1928; Associate Professor, University of Chicago since 1930.

feature of retinal detachment, namely, the tears and holes in the retina. It is not my intention in this paper to discuss the rôle which the tears play in the mechanism of retinal detachment, whether they represent the last cause of the detachment or whether

fortunate quality could not make up for the difficulties encountered when we tried to find the tears.

The tears in the neighborhood of the ora serrata are difficult to see and still more difficult to observe as to their response to sur-

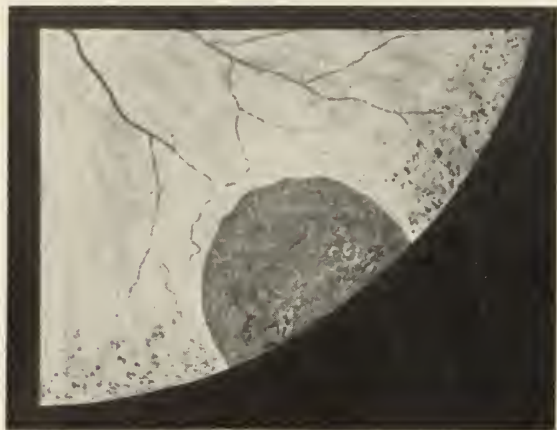


Fig. 1. Semicircular retinodialysis (retinal tear at the ora serrata), after Arruga.



Fig. 2. Two small retinodialyses after Arruga.

they occur after the detachment has taken place. I only want to use the tears as the criterion of classification, hoping that this procedure may lead to a useful scheme either for practical or theoretical purposes. *Gonin* has found that the large majority (85%) of tears lie in the anterior segment, around or anteriorly to the equator. He furthermore states that 10% of all tears lie at the ora serrata or its immediate neighborhood.

He uses the term "ora serrata conventionnelle" as a synonym for the limits of the ophthalmoscopic field after maximal dilation of the pupil as suggested by *Amsler* and *Dubois*. That boundary almost coincides with the anatomic ora serrata on the temporal side and lies from 1 to 2 disc diameters posteriorly to it on the nasal side. The use of the words "ora serrata conventionnelle" for the limits of the ophthalmoscopic field seems permissible because the lesions discussed in this paper lay in the temporal halves of the globes where the two boundaries almost coincide.

This type of retinal detachment will be dealt with exclusively in this paper, giving the experiences which I and my colleagues at the University of Chicago had with seven cases falling in this group. All of the cases of this type have in common that the tears were easily accessible and that the surgical procedure was comparatively easy. This

gical procedures. They either represent real holes, as everywhere else in the fundus, or in this situation separations between the retina proper and pars ciliaris retinae (Figs. 1 and 2). The latter condition was apparently described first by Theodor *Leber* in 1882 and called "Abreissung."³ *Gonin* in his address of the Société française d'Ophthalmologie in 1920 speaks of *ruptures at the ora serrata*. Later on French authors named it "desinsertion," i.e., partial loss of the insertion at the ora serrata. In a German paper *Amsler*, *Gonin's* associate, used the term "Retinodialysis,"⁴ which represents probably the best English word for this condition, although the term avulsion is in use also. *Gonin* dealt with it specifically in a paper, "Les désinsertions de la rétine," which he read at the 43d meeting of the Société française d'Ophthalmologie in 1930. This paper contained *Gonin's* observations on 25 patients with retinodialyses which he found in his first series of 240 cases with retinal detachment.

Some of his conclusions are:

Tears at the ora serrata are very easily overlooked even by experienced ophthalmologists. They were most likely present in those cases in which, despite clear media, even *Gonin* himself could not figure out how "the fluid of the vitreous spread behind the retina."

Retinodialysis cannot be sealed by one ignipuncture. A whole series of chorio-retinal scars is necessary to fix the retina in its normal position.

The result of repeated operations very often is the persistence of retinal folds and imperfect reattachment in the macular region; this accounts for metamorphopsia and permanently impaired vision.

Retinodialysis is the result of traction on a very extensive adhesion between vitreous and retina. Therefore, the closure of one rupture is very frequently followed by the formation of a secondary tear and further spreading of the detachment.

Prospects in cases of retinodialysis are particularly bad. Among 15 cases treated surgically *Gonin* accomplished complete reattachment (*guérisons complètes*) in four cases and partial reattachment without further impairment (*arrêt de décollement, guérisons partielles*) in three cases; this is a smaller proportion than in the other forms of retinal detachment. Although the localization of the rupture need not be done with great accuracy the retinodialysis presents no opportunity at all for a beginner "*qui compte sur un succès clinique pour affermir sa confiance dans le traitement du décollement rétinien par la thermoponction.*"

Gonin's associate, M. *Amsler*, mentions the cases of retinodialysis among those in which the ignipuncture is contraindicated. He believes that in those cases pathologic changes of the vitreous play the predominating rôle. He operated upon four patients with ruptures below and temporally—they were all young emmetropes—without any success. He concludes that he probably would not attempt ignipunctures in further cases of this type.

Arruga had four eyes with tears at the ora serrata in the series of 33 cases which he reported before the XIIIth Concilium ophthalmologicum in 1929. He apparently got satisfactory results in both eyes of one patient ($RV = 0.5$ [after 1 ignipuncture] $LV = 0.2$ [after 2 ignipunctures]) while in the other two cases the final vision was only fingers at one and $\frac{1}{2}$ meters and 0.1.

Fortunately, I did not know of *Gonin's* and *Amsler's* bad experiences when I saw my first patient of retinodialysis. My results have been encouraging and this is the main reason why I am presenting them, although my series is comparatively small and the pe-

riod of observation since the last operation relatively short. During the course of the last year I have seen seven cases with retinodialyses at the University of Chicago Eye



Fig. 3. The electric cautery (natural size).

Clinic. The following report is based upon my experiences in those seven cases.

TECHNIC

The technic was practically the same in all seven cases, namely, *Lindner's* modification of *Gonin's* method.⁵ The localization was always attempted with a Gullstrand Ophthalmoscope on which a perimeter arc was mounted. The patient was asked to follow a little electric globe, which was moved in a carrier along the arc, until the center of the tear appeared in the center of the ophthalmoscopic field. This method is not very accurate when it is used to localize tears in the extreme periphery; besides, it is rarely possible to see tears near the ora serrata with the Gullstrand. The motility of the patient's eye in that particular direction must be exceptionally good to make the central edge visible. The meridian, however, can nearly always be determined with sufficient accuracy. In figuring out the location of the proximal edge of the tear, I usually followed *Gonin's* method and measured the distance from the central edge of the tear to the limit of the ophthalmoscopic field. I always used the electric cautery to perforate the sclera and to cauterize the choroid (Fig. 3) and I followed *Lindner* inasmuch as I always left the cautery inside the eye for from 8 to 12 seconds. I always aimed at the central edge of the dialysis.

THE CASES

Table I contains the most important data concerning my seven cases. The positions of the dialyses can be found in Table II. The detail description of the findings before the operation and of the postoperative behavior of the eye is of great importance and will be published at a later date.

In Case 5 the reader finds a question mark after the words "complete reattachment."

TABLE I

No., name, sex and age	Cause or predisposing factor; refraction	Portion of retina detached	Duration before operation	No. of operations	Results	Period of observation since last operation	Change in vision
1. J. R. male, 18	trauma; +1.25 +1.25cx90	lower temporal half	3 weeks	4	complete reattachment	9 months	0.6-3 to 0.6 3
2. W. T. male, 25	trauma; approx. emmetropic	lower temporal half	4 months	1	partial temporary reattachment; pat. refused further operations		Fingers at 10 feet to 0.1
3. E. P. female, 26	old chorioretinitis lesions in and around area of dialysis; +1.25 +0.75cx45	lower temporal half	at least 2 months	3	complete reattachment	13 months	0.6-2 to 1.2-2
4. J. O. male, 55	old chorioretinitis lesions in and around area of dialysis; +1.50 +0.50cx30	lower temporal half	5 months	3	complete reattachment	10 months	Fingers at 3 feet to 0.3
5. E. F. male, 27	old chorioretinitis lesion, traumatic detachment in the other eye; +4.50 +0.50cx90	lower half	3 weeks	1	complete reattachment (?)	7½ months	0.3 to 0.4
6. F. Z. female, 15	unknown; -0.25 -0.25cx180	lower half	3 weeks	1	partial temporary reattachment; later almost complete redetachment		0.4 to Fingers at 3 feet to 0.4
7. G. Z. male, 46	trauma; approx. -1.00	upper temporal half	2 months	2 (1 post. sclerotomy)	slight progression of detachment	8 months	20/40 to 20/100

The lower half of the retina was detached in this case and one large dialysis was found in the neighborhood of the vertical meridian. Besides there were several small round "punched-out" holes in the retina around the large dialysis. The latter was sealed by one ignipuncture. The smaller holes remained open and after two months are still visible near the limit of the ophthalmoscopic field. The retina around them is white and I am not certain whether this small area which measures about 3-4 P Ds in every direction represents just edema or edema plus detachment. During the last 7 months no change in the field or in the ophthalmoscopic picture has been noted in this case.

The results obtained in my small series may be discussed under the following headings:

1. Topographic relation between tear and detachment.
2. The rôle played by the tears in the mechanism of these cases.
3. The etiology of the detachment in our cases.
4. The "best surgical procedure."

(1) The topographic relation between the retinodialysis and the detachment seems to be a very regular one in my patients. If one wants to express this relation in geometrical terms, it looks as though the tear nearly always lies in the axis of symmetry of the detachment. By drawing this axis in the field chart one should strike the tear. Table II shows this for our seven cases.

These figures seem to allow conclusions as to the most probable position of the retinodialysis if one cannot find it immediately. They also show that the detachment in these cases does not spread quite as much above the horizontal meridian as the law of symmetry would require. Dialyses in the upper half of the fundus do not follow that rule and are usually located very near the upper border of the detachment. These facts certainly speak in favor of the hypothesis that there is a very intimate relationship between retinal tear and detachment.

(2) Cases 1, 3 and 4 permitted very accurate studies of the relation between the dialysis and the detachment. In each of them it was observed that the detachment persisted as long as the proximal edge of the dialysis was not completely and firmly adherent to the underlying choroid. In Case 5, there are still a few small holes open

TABLE II.—THE TOPOGRAPHIC RELATION BETWEEN DETACHMENT AND DIALYSIS

Patient	Extent of detachment in radii	Geometric axis of detachment radius	Extent of dialysis in radii	Geometric axis of dialysis radius
1.—J. R.	200-15	290	275-320	295
2.—W. T.	195-30	290	280-290	285
3.—E. P.	145-330	235	200-250	225
4.—J. O.	225-45	315	295-335	315
5.—E. F.	180-360	270	265-275	270
6.—F. Z.	180-360	270	250-270 appr.	260

which, however, lie in the immediate neighborhood of a firm artificial chorioretinal adhesion. In Case 2 the dialysis was missed and merely an adhesion was produced about 3 P D from the tear, resulting in only a temporary improvement.

I do not know why Case 7 did not respond at all to the closure of his dialysis, which was done *lege artis* as far as I know. There is, however, the possibility that one or two smaller dialyses are still present, although I spent many hours looking for them and made extensive use of the method of *Trantas* also.

These observations seem to confirm the theory that the closure of the tear is the most essential feature in the surgical treatment of retinal detachment.

(3) In three of the seven cases a definite relation between direct blunt trauma to the eye and the occurrence of the detachment could be established. The development of a retinodialysis is easily understood in these patients. In two of the four spontaneous detachments signs of a pathological process in the choroid were visible. The remaining two patients have to be put in the group of idiopathic detachment, although I believe that symptoms of a chorio-retinal disease could have been detected if our methods were more perfect or my patience had lasted longer. About the various diseases of the fundus which may finally cause a retinodialysis I want to be very brief and am just mentioning them:

1. The cystic degeneration of *Blessig*.
2. The peripheral chorioretinitis of *Meller-Pressburger*.
3. The peripheral fundus degeneration of the myopic or senile type of *Vogt-Rehsteiner*.
4. Periphlebitis tuberculosa as suggested by *Gonin*.

Clinically it is often difficult to distinguish

between lesions of Type II and Type III. Judging from the age of the patients, we were most likely dealing with inflammatory lesions in Cases 3 and 5, and with a degenerative process in Case 4.

(4) As stated by *Gonin* and confirmed by *Arruga* and myself, the large retinodialyses require several operations, which is very unpleasant for the doctor and the patient. I have, therefore, often been advised to cauterize larger portions of the proximal edge at once in order to shorten and simplify the therapeutic procedure. I have been advised to use a larger cautery and to introduce it along the edge of the dialysis. In view of *Gonin's* statement concerning the frequency of secondary tears in these cases I am more in favor of my method which leads to point-shaped adhesions of the retina and allows the latter to adjust itself better than if we produced extensive adhesions in one session. Those broad synechiae are more likely to pull the retina into a faulty position than narrow point-shaped adhesions. I believe that I am right in saying that the method used in my cases has proven to be successful in a large percentage of cases and is therefore a proper and adequate method. In cases with tears at the ora serrata one has to choose between this method or the new "Abriegelung's" operation of *Guist* and *Lindner* (*Graefe's Archiv*, 1932). These authors have given up the heat cauterization altogether and are using a chemical agent, dry potassium hydroxide applied to the external surface of the choroid. The diseased torn area is surrounded by a row of chemically cauterized areas of choroid which produce a line of firm chorioretinal adhesions. Thus the diseased portion of the retina is walled off and separated from the healthy tissue. *Lindner* and *Guist* have had better results with this new method than with the electric cautery. The main difference seems

to be that the new method does not forcibly bring the retina into any position. It is left up to the natural and endogenous forces in the retina to resume its normal position. Those of us who have more confidence in the cautery than in any new caustic agent, should learn from the good results of the *Lindner-Guist* operation that it is mainly the choroid which we want to stimulate and to irritate, and have to avoid direct effects on the retina as much as possible. A pointed cautery which is not inserted too far into the eyeball will do that better than a large red hot surface. I believe that several cauterizations with the small cautery are much less dangerous than one very extensive and intensive one which does not allow the nat-

ural forces to adjust the position of the retina.

SUMMARY

Seven cases of retinal detachment with tears at the ora serrata (retinodialysis) were carefully studied and operated upon, following the method of *Gonin-Lindner*. Complete and lasting reattachment was accomplished in four of these seven cases.

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DIFFUSE HYPERTROPHY OF THE BREASTS*

PRELIMINARY CASE REPORT

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FLINT, MICHIGAN

Massive enlargement of the female breasts has been reported in the literature, at rare intervals, since authentic medical anomalies have been recorded. This condition has been commonly classified as "diffuse hypertrophy."

As early as 1669, Durston¹ reported a case of hypertrophy of the breasts causing sudden death. At postmortem, it was found that the left breast weighed 64 pounds and the right, 40 pounds. Borellus² in 1676 stated that he had knowledge of a woman of ordinary size, each of whose mammae weighed about 30 pounds and that she supported them in bags hung about the neck. The faculty at Montpelier³ in 1878 presented a most interesting case developing at the age of 15. The increase in size of the breasts was rapid. The circumference of the right breast was 94 cm. and of the left, 105 cm.; the pedicle of the former measured 67 cm. and of the later, 69 cm. It is of further interest to note that this enlargement remained constant for several years. Then at the age of 32, after three pregnancies, the hypertrophy had diminished to such a degree that the circumference of the right breast was but 27 cm. and of the left, 33 cm.

More recent medical literature contains case reports of diffuse hypertrophy of the breasts by Ghosh,⁴ Plummer,⁵ and Olivella.⁶

The case which we wish to present before this Obstetrical and Gynecological Section today is one of a sudden massive hypertrophy of both breasts during the early months of pregnancy.

Mrs. T., age 21, became pregnant for the first time during the latter part of January, 1931. In the early weeks, there was a slight fullness of the breasts accompanied by some tenderness. No marked increase in size was noted until the beginning of the third month, when, within a period of three weeks, an enormous enlargement took place. This enlargement of the breasts was not accompanied by any untoward symptoms. The only complaint came from the discomfort arising from their huge size. The left breast measured 26 inches in circumference; the right, 25.5 inches. From the base of the left breast to the nipple was 15.5 inches; the length of the right, 17 inches. Within this three weeks, the total body weight had increased from 116 to 152 pounds—a gain of 36 pounds. However, the patient insists that during the increase in size of the breasts, the rest of the body had become thinner; especially was this true of the arms and legs. It would be a conservative estimation that the breasts had actually gained over 40 pounds within this three-week period.

The breasts, unsupported, hung down over the abdomen as two huge edematous masses. The skin was coarse, thickened, from the tremendous increase in size. The breast tissue would pit upon pressure and deep markings appeared where an uplift binder had attempted to give relief from the excessive weight. Examination revealed no definite palpable masses. Pain and tenderness were absent even upon deep pressure. The only sign of an embarrassed

*Read before the Section of Obstetrics and Gynecology of the Michigan State Medical Society at its annual meeting in Pontiac, Michigan, September 23, 24, 1931.

venous circulation appeared over the sternum, where a network of veins were found engorged.

General physical examination revealed no apparent effects from this sudden massive hypertrophy. The pulse rate was 78. The blood pressure 116/74. The left border of the heart was but slightly outside the mid-clavicular line. There were no valv-

suggested as the source of this hormone. A rapid and pronounced hyperplasia has been produced in the breasts of rabbits after placental injection. R. T. Frank believes that the placenta may act merely as a storage



Fig. 1.



Fig. 2.

lar murmurs. Except for tiring easily, the patient insisted that she had never felt better.

After the three weeks period of excessive growth of the breasts, further enlargement ceased as suddenly as it began. Over four months have now passed without any appreciable change in their size or shape. Our patient is, at this writing, approximately 8 months pregnant. Questioning whether fetal deformity accompanied this anomaly, X-ray examination was advised. Dr. Carl H. Chapell submitted the following report: "Examination of the abdomen by Potter-Bucky technic, in the antero-posterior, lateral, and postero-anterior positions, shows a fetal outline of about eight months. It is in the transverse position, the head extending above the crest of the right ilium, and the buttocks in the left iliac region. The bones of the head are plainly marked and normally calcified, also the vertebrae, ribs and extremities. The level of the uterus is at the first lumbar vertebra; probably a normal amount of fluid. In none of the examinations are any pathological changes seen in the bones of the maternal pelvis, vertebrae, or ribs which are shown. I believe this to be a normal transverse position of about eight months duration."

The causative factor in sudden diffuse hypertrophy of the breasts remains one of conjecture. Amati,⁷ Laqueur,⁸ and Parkes⁹ have reported interesting experimental results which suggest that certain hormones have a definite part in the development of the breasts. Graves¹⁰ is of the opinion that, "there is no doubt that changes in the mammary glands are due to the circulation in the blood of some chemical substance which represents a true hormone." The ovary, the corpus luteum and the placenta have all been

reservoir for the active principle elaborated by the corpus luteum during the early part of pregnancy, calling attention to the fact that the corpus luteum during the latter half of pregnancy is an involutionary, functionless organ. Laqueur states that the ovary is responsible for this hormone which he has named "menformon."

As to the type of hypertrophy which these breasts show, Babcock¹¹ lists two varieties: "A"—Fibro-epithelial; "B"—Adipose (rare). He further states that this condition is not one of true hypertrophy but a great overgrowth of fibroconnective, myxomatous tissue.

In our one case, we await with interest the changes in the breasts during the puerperium. We feel that operative measures should be considered only when the degree of normal involution is evident.

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PIGMENTATION AND KERATOSIS FOLLOWING THE USE OF ARSENIC

REPORT OF A CASE

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Protocol: A. D., female, married, age twenty-one, was referred to me for diagnosis and treatment.

Family History: Both parents living and well.

Past History: Very little can be elicited save for occasional "colds"; tonsillectomy during early youth; teeth apparently in normal condition. A child was born prematurely at 8 months, three years ago. Serologic examinations however were consistently negative. The patient suffered from recurrent psoriasis for the last ten years.

Present History: Primary Inspection: The entire body is covered with silvery mother-of-pearl scales, which when removed disclose glistening membranes and bleeding points; the dermatosis is more marked on the extensor surfaces of the extremities and also at the hairy margin of the scalp. The diagnosis is obviously *psoriasis*. At this juncture I wish to state that the patient was in the habit of taking Fowler's solution steadily for at least 8 years, as this seemed to alleviate the dermatosis. It was not done on the advice of a physician, however, but of her own accord, since the lesions readily responded to its use. A serological test proved negative and the blood picture was normal. Urinary examination negative.

Terminal Inspection: Interspersed between the psoriatic lesions may be observed papular and lenticular keratoses and numerous papillomatous excrescences, especially more pronounced on the palms of hands and soles of feet and from 1 to 3 cm. in thickness. Concomitantly there exists an intense *brown pigmentation* throughout the entire body, especially more appreciable on the face, which on first sight gives the patient the appearance of belonging to colored stock, although by nationality and race she is a Slovakian and pure Caucasian. She noticed this pigmentation and keratosis about 3 three years ago, which has gradually increased in intensity. Her blood pressure is 85 systolic; diastolic not audible.

Dermatologic literature has repeatedly shown the ill effects of the continuous use of arsenical preparations; it is therefore not necessary to quote extensively different authorities who have pointed out this complication from the injudicious and prolonged use of arsenic. They have likewise stressed the grave possibility of malignancy that in certain instances superimposes itself upon the original keratosis. Norman Walker of Edinburgh has encountered a number of such cases. It is deplorable that our modern textbooks on Dermatology have very little

to say about arsenical hyperpigmentation and keratodermia. It is superfluous to say that the *prognosis* in such cases is highly problematical.

In this case sodium thiosulphate was used empirically; so were intramuscular injections of bismuth salicylate; the latter was used not so much for influencing the keratosis, but with the hope of affecting the psoriatic process. The soles and palms were exposed to dermunits of X-ray with no appreciable result whatsoever. Within the month wherein the patient was under my observation nothing whatsoever was accomplished, and the patient, impatient for immediate and startling results, left me precipitously. Nor do I think there is any therapeutic measure that would extend any hope for relief of this dermatosis. It is essential, however, to bear in mind that the ultimate prognosis as far as malignancy is concerned is rather unfavorable.

SUMMARY

1. The continuous and unguarded use of arsenic in dermatology may lead to hyperpigmentation and keratodermia.
2. Its ultimate consequence may be of a malignant character.
3. No therapeutic measure is known that promises a restitution to the normal.

622 MACCABEES BUILDING

†Dr. Aronstam is a graduate of Michigan College of Medicine, 1898. He did post graduate work University of Berlin 1907; practiced limited to Dermatology and Syphilology. He was formerly Professor of Dermatology, Michigan College of Medicine; is a member of the Medical Authors' Association, and received honorable mention at the International Congress of Hygiene, Dresden, Germany, 1912.

PNEUMONOCONIOSIS IN IRON MINERS

George B. Lawson, W. P. Jackson and J. E. Gardner, Roanoke, Va., emphasize that operators of air drills working four or five years in an atmosphere heavily laden with iron ore and silica dust may develop distressing symptoms of lung fibrosis after they have discontinued mining and have lived from four to eight years in apparently good physical and hygienic conditions. The fact that such opera-

tors at the time of their retirement from years of exposure to iron and silica dust have no symptoms may have but little bearing on the future progress of their disease. This form of lung fibrosis is not merely a cumulative action of dust but is a result, a stage of the disease which requires for its development a certain amount of time after the heavy inhalation of dust. This marked secondary fibrosis is comparatively rapid in its development.—*Journal A. M. A.*

BRAIN ABSCESS AND LATERAL SINUS THROMBOSIS AS A COMPLICATION IN MASTOIDITIS*

REPORT OF TWO CASES

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The first case reported is presented because of the multiple complications encountered.

Case 1.—C. A., female, fifty years old. She was first seen June 19, 1928, when she complained of pain in the right ear. The patient had had pain and discharge in the right ear for eight days as well as some fever, but no chills. She had a severe throbbing pain in the head for one day and had been unable to sleep for two or three nights. Examination revealed a temperature of 100.5 and the patient appeared sick. There was some discharge from the right ear through a small central perforation and the pus was pulsating. There was marked tenderness over the tip of the mastoid process. The general examination otherwise showed nothing of importance. The white blood count was 6,330; polymorphonuclear, 68 per cent. The X-ray showed both mastoids well developed and a pneumatic type of mastoid in which the cells were clear and showed no pathology. A diagnosis of acute mastoiditis, right, was made.

The following day a simple mastoidectomy was done. There was nothing unusual except that there were several cells broken down at the tip and a small abscess over the lateral sinus plate. The remaining cells showed little destruction. A culture made from the right mastoid showed hemolytic streptococcus.

By the second day after the operation there was a marked cellulitis of the neck. This gradually subsided, but the temperature varied from 98 to 102 or 104 degrees each day for the following eight days. A blood culture taken three days after the operation showed hemolytic streptococcus, eight colonies per c.c. of blood. A blood culture taken seven days after the operation showed one colony per c.c. of blood. On the sixth day after the operation the patient was seized with sudden dyspnea, cyanosis and pain in the left subscapular region. A chest consultation was called and a diagnosis of possible pulmonary embolus was made. Three days after the operation the white blood count was 9,150, and seven days after the operation it was 11,500.

Nine days after the mastoidectomy, the right lateral sinus was opened. There was a localized abscess within the lateral sinus with a thrombus on each side. The thrombus was removed and the sinus packed with gauze after a good flow of blood had been established. Three days after the ligation the blood culture showed seventy colonies per c.c. of blood. Two days later an abscess formed in the neck at the site of ligation. Fourteen days after the ligation an abscess in the left leg, anterior tibial region, was incised. Four days later, an abscess in the same location on the right leg was incised. A culture from each abscess showed hemolytic streptococcus. A blood culture made twenty-seven days after the mastoidectomy and eighteen days after the jugular ligation, was negative. The patient was given three transfusions of 500 c.c. of blood each. The red blood cell count improved from 3,930,000 at the time of jugular ligation to 5,100,000 on discharge from the hospital thirty-five days after the mastoidectomy.

The complications which followed the mastoidectomy were: cellulitis of the neck, hemolytic streptococcus, septicemia, pulmonary embolus, lateral si-

nus thrombosis, abscess in the neck at the site of ligation of the jugular vein and metastatic abscesses of both legs. In reviewing this case one wonders what would have happened if a mastoidectomy had not been performed. On the other hand, there must have been carious bone over the lateral sinus at the time of the mastoidectomy and removal of this might have prevented the thrombosis. Also, the abscess in the neck might have been prevented if the vein had not been cut between the ligatures.

In making a diagnosis of any case of lateral sinus thrombosis there are definite signs and symptoms for which one looks. The most important is bacteriemia, accompanied by a septic temperature and an increasing blood count, usually near 20,000. The cerebral circulation is disturbed; headache, nausea or vomiting may be present. Optic neuritis is present in about twenty-five per cent of the cases. The spinal manometer will show increased pressure, approximately 200 to 250 mm. If pressure be made over the jugular vein of the occluded sinus there will be no change in the cerebral pressure. But when pressure is made over the jugular vein of the free sinus there is a marked and rapid increase in pressure. This, of course, is very helpful in a case of bilateral mastoiditis with a questionable lateral sinus thrombosis. The common physical findings are tenderness along the mastoid vein at its point of entrance to the mastoid foramen. The point is about one and one-fourth to one and one-half inches behind the orifice of the cartilaginous meatus and on a level with its floor. The jugular vein may be sensitive to pressure and there may be noted some induration about the vein. The glands in front and behind the sternocleidomastoid muscle may be enlarged. The sinus wall often shows adhesions between the wall and the overlying bone. The presence of fluid-pus in contact with the sinus wall may be found as well as granulations upon the wall and inflammatory changes without granulations. The moderate luster characteristic of the normal dura may be lost and the usual bluish-gray color changed to a somewhat purplish hue. Metastatic abscesses from septic emboli are fairly common in the sternum, wrists, elbows, knees and ankles. Septic pneumonia or septic endocarditis is not uncommon.

The treatment of lateral sinus thrombosis is immediate operation. The operation of choice by most otologists is removal of the clot and diseased sinus wall plus ligation of the jugular vein. However, if the jugular vein is thrombosed or evident phlebitis present, the resection operation is often done.

Case 2.—W. B., boy, eight years old. June third, the child complained of pain in the right side of his face and about the right ear. A dentist was consulted but nothing was found to account for the

*Read before the section on Ophthalmology and Otolaryngology at the 111th meeting of the Michigan State Medical Society, Pontiac, September 24, 1931.

†Dr. Wilkinson graduated from Johns Hopkins Medical School in 1923. He spent six years in post graduate training at the Henry Ford Hospital, specializing in eye, ear, nose and throat work. He is a Diplomate of the National Board of Medical Examiners; Certified by the American Board of Otolaryngology; Fellow of the American Academy of Ophthalmology and Otolaryngology; Fellow of the American College of Surgeons.

pain. Two days later the right ear began to discharge. The ear discharged for three days. For the next eight days nothing unusual was noted except an occasional headache. On the fifteenth day of the illness the child complained of an intense right temporal headache, vomited and had several con-

revealed a papilledema of two diopters in the right eye and one diopter in the left. The veins were engorged. The visual fields showed lower hemianopic indentations as pictured in the accompanying diagram. The neurological examination revealed nothing unusual except slight weakness of the left

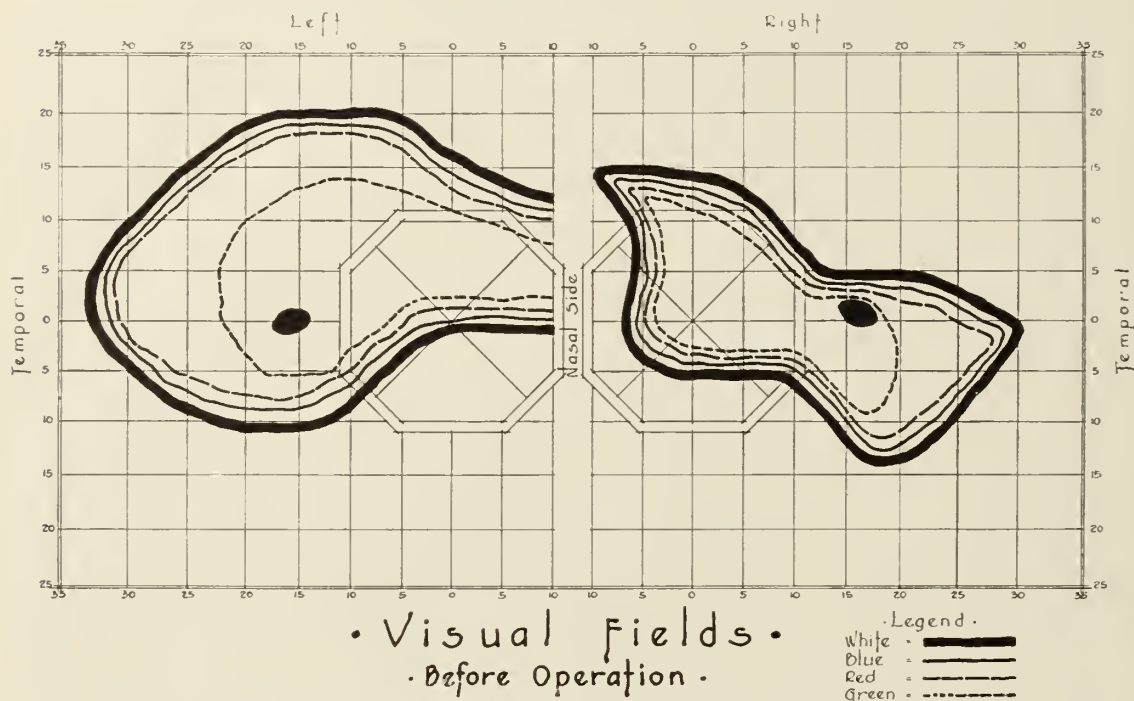


Fig. 1. Fields taken before operation showing bilateral indentations. The indentations are in the lower quadrants, which indicates that the abscess is high up and deep in the temporo-sphenoidal lobe.

vulsive seizures involving the left arm and leg. The child was taken to the hospital by the family doctor and an ear consultant was called who noted that there was slight mastoid tenderness; the right ear drum was bulging and a paracentesis was done. The diagnosis was acute otitis media. A spinal puncture was done and the fluid examination showed the following: Wassermann, negative; globulin, moderate increase; cells, three per cm. The X-ray of the mastoid showed that the cells on the right were more dense than on the left. The cell walls were indistinct and hazy. The child's temperature was 103 and his pulse rate was 120 on the fifteenth day of the illness. The following day the temperature dropped to 99 and the pulse rate to 90. The white blood counts taken on the seventeenth and twenty-first days of the illness were 16,500 and 11,400, respectively, with 79 per cent polymorphonuclears. The child went home six days after entering the hospital.

I first saw this patient twenty-four days after the beginning of his first symptoms and nine days after the convulsive seizure. The child continued to complain of headache in the right fronto-temporal area and vomited at intervals. The vomiting was not described by the parents as projectile. The child was very irritable and would not cooperate during the examination. The examination showed him to be a well-nourished boy of eight, not particularly sick, with a temperature of 98.6 and a pulse rate of 120. The left ear appeared to be normal while the right showed dry blood in the canal and a slightly hazy drum. The hearing on the right was slightly impaired. The ophthalmoscopic examination

revealed a papilledema of two diopters in the right eye and one diopter in the left. The veins were engorged. The visual fields showed lower hemianopic indentations as pictured in the accompanying diagram. The neurological examination revealed nothing unusual except slight weakness of the left

hand. The white blood count was 16,000, with 72 per cent polymorphonuclear cells.

My diagnosis was mastoiditis, right, with a brain abscess of the temporal lobe. I advised a mastoidectomy and exploration of the brain abscess and operated on the twenty-sixth day of the illness.

The mastoid was sclerotic in type with granulation tissue in a few cells. The antrum was filled with granulation tissue. From the antrum upward there was soft necrotic bone destroying a portion of the dural plate. The dura did not have the normal glistening appearance. It was dull and red-dened, but had no granulation tissue over it. The dura was exposed for about 2 cm. The wound was cleansed with peroxide and mercurochrome and the dura was incised. About one and one-half ounces of pus exuded when a trocar was inserted. The dura was then opened for about two cm. in length, a cigarette drain inserted and held in place by packing. The culture proved to be pneumococcus, Type I.

The post-operative care consisted of changing the drain every two days under gas anesthesia. The discharge was profuse for the first few days. The recovery was uneventful. The child's disposition completely changed to that of a very cooperative patient. On the fourth day after the operation the white blood count was 11,500 with 50 per cent polymorphonuclear cells; on the eleventh and sixteenth days after the operation the white blood count was 6,950 and 6,550, respectively. The patient did not complain of headache nor did he vomit after the abscess was opened. There was a gradual disappearance of the papilledema. Twenty-seven days after the operation the patient left the hospital

The visual fields did not return to normal for about three months. (Diagram.)

This case presents the following interesting facts: Temporary discharge from the ear followed by headache, vomiting and several convulsive seizures. There was no discharge from the ear when first

and mixed infections in about 40 per cent of the cases. The infection may travel by direct extension through the tympanic or antral roof. An extra-dural abscess may

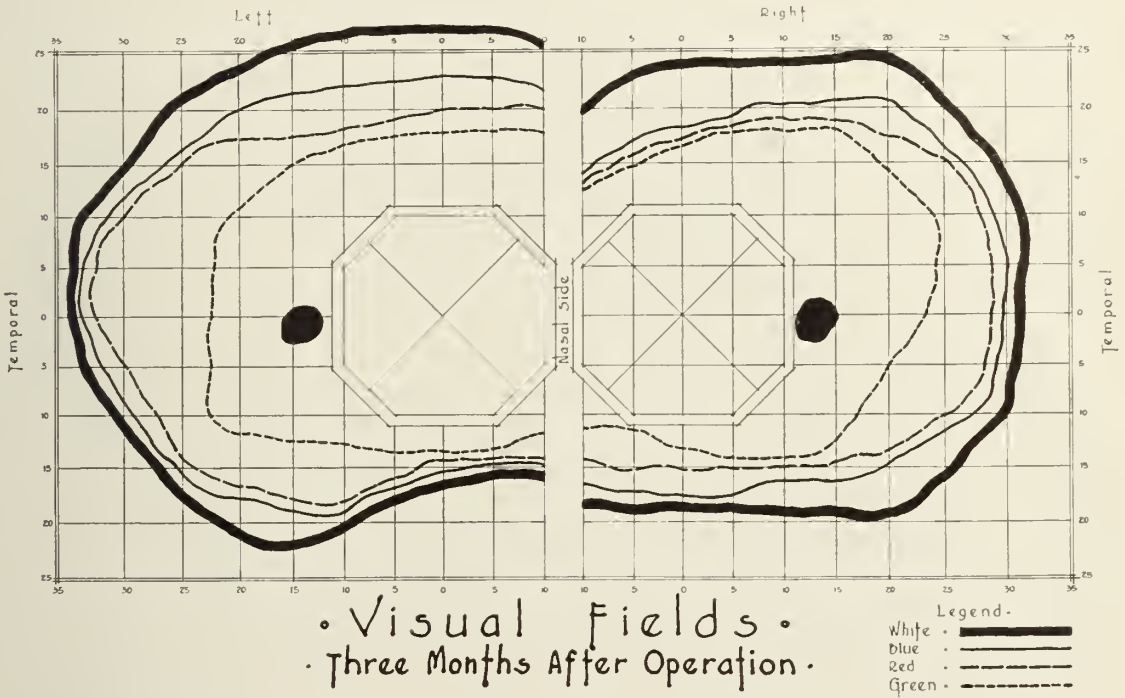


Fig. 2. Fields taken three months after operation. This shows how the visual field defects completely disappear if the abscess is evacuated early.

seen by me, although paracentesis had been performed a few days before. The X-ray of the mastoid showed little pathology. There were very few general localizing signs. However, with the history of a discharging ear, a left side convulsion, persistent vomiting and headache, and the finding of choked disc and visual field defects, I felt that there were definite indications for mastoidectomy and exploration of the dura. The abscess was opened on the twenty-sixth day of the illness, and was quite large, containing one ounce and one-half of thick creamy pus. Considering the size of the abscess, I feel it would likely have proved fatal if the operation had been delayed any length of time.

Let us consider brain abscesses in general. As for etiology, 75 to 85 per cent of all brain abscess cases are secondary to chronic suppurative otitis media. The great majority of cases are found in individuals from ten to thirty years of age. They are twice as common in men as in women. In 75 per cent of the cases the location of the abscess is the temporo-sphenoidal lobe. Next in order of frequency are the cerebellum and frontal lobe.

The organism most frequently present is the streptococcus. Pure cultures are found in 35 per cent of the cases. Diplococci and staphylococci occur in 5 to 10 per cent,

be formed or there may be an erosion in the bony plate covering the tympanic vault and antrum. This gives rise to inflammatory changes in the adjacent dura and extends into the brain by the blood-vessels to the adjacent structures and cerebral arteries to the deeper substance of the brain, or by disintegration of the inflamed area. There may or may not be a capsule or limiting membrane about the abscess.

The first symptoms are usually a chill, followed by high temperature and severe headache. Vomiting may or may not be present. The patient may then feel fairly well or may have symptoms of increased intracranial pressure. The headache differs from that of the onset in that it is the excruciating type which causes the patient to cry out, often described as boring in type and usually worse at night. There is often insomnia; all sleep is fitful and easily broken. The temperature after the initial stage may be normal, or quite typical is a degree below normal to one or two degrees above normal. The pulse usually slows with the increase in the size of the abscess.

Cerebration is slow, difficult and retarded. Concentration is very difficult. Vomiting is rare after the initial stage is past. There is progressive rapid loss of flesh and strength and the appearance of grave illness out of proportion to any of the symptoms present.

Papillitis or optic neuritis may be present but is more common in slow growing brain tumors than with brain abscess. Whether papillitis is observed or not, visual field studies are very important and routine daily examinations should be made. When an indentation is definitely elicited, it is pathognomonic. In a sphenotemporal lobe lesion the indentation is always bilateral and is usually situated in the contralateral upper quadrant of the fields, because of the usual position of the abscess being low down, just above the tegmen where it compresses the lower subcortical fibers of Gratiolet. If the abscess is higher up and deeper, the indentations may be in the lower quadrants. Exceptionally, there may suddenly appear a complete contralateral hemianopsia from the pressure of a large abscess. The persistent absence of hemianopic indentations assists in excluding a temporo-sphenoidal lobe abscess. However, the general central edema that accompanies cerebellar abscess may cause hemianopic visual indentations accompanied by a general field contraction.

Localizing signs and symptoms cannot be

discussed in a paper of this length. However, a few of the cardinal signs and symptoms will be given. In temporal lobe lesions occur muscular paresis, paralysis or spasms, word-deafness, psychical blindness, word-blindness, motor aphasia and motor agraphia. In cerebellar lesions we find nystagmus, subjective vertigo, incoördination, ataxia on the side corresponding to the lesion, diadokokinesis, loss of sense of position, and disturbance of static equilibrium.

Death may take place from rupture of the abscess into the ventricles and subarachnoid space or from exhaustion due to a gradual loss of strength and flesh. The treatment of brain abscesses is surgical. Eggleton in his book on brain abscess says, "Exposure of the under surface of the temporo-sphenoidal lobe through the roof of the tympanum and antrum followed by puncture of the dura and brain and introduction of drainage material has resulted in a larger proportion of recorded cures than any other method." There is no doubt that this is the best procedure, provided one has very good evidence that the lesion is adjacent to the mastoid cavity. However, one must not lose sight of the fact that he is working through an infected field. If one is unable to localize the lesion, a large subtemporal decompression over that side of the head nearer the infecting focus is a far safer procedure.

664 FISHER BUILDING

PHOTOGRAPHS OF THE FUNDUS OCULI*

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For many years the X-ray has been found most valuable not only in discovering disease, but in the recording of changes in the bones and tissues of the body. The technician has the X-ray negative, otherwise he would have to depend upon memory and notes. So photographs of the retina of the eye, both in normal and disease, are equally valuable.

In the use of ophthalmoscopy, the art of seeing the interior of the eye is being yearly more impressed upon each group of graduating students. Many find difficulties in observation and in the interpretation of the findings but with a picture this is greatly simplified.

In a diseased condition as papilledema,

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†Dr. Ryerson graduated from the Detroit College of Medicine 1911; assistant professor of ophthalmology, Detroit College of Medicine.

retinitis, optic atrophy, etc., the small changes in recovery or destruction over a long or short period of time are not always seen and recorded, while a repeated photograph gives a constant check.

The first pictures taken by a Nordenson camera left a large light reflex in the mid-

dle of the plate, but the present Nordenson takes a clear picture with only a very small black spot near the center. As the third dimension (depth) gives a better result, two pictures are taken at an angle and then reviewed stereoscopically.

these may disappear or move when the direction of light is changed, it is necessary to decide whether a bright area in a picture is an exudate or reflex. When studied as stereo pictures there is little question of doubt.



Fig. 1.

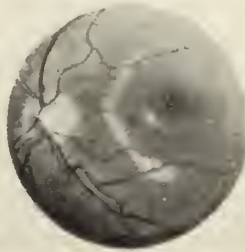


Fig. 2.



Fig. 3.

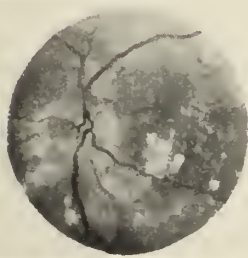


Fig. 4.

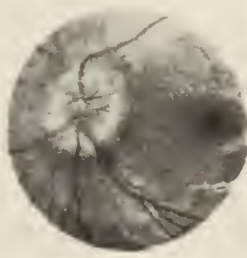


Fig. 5.

Figs. 1, 2, 3, 4 and 5 correspond respectively with Cases 1, 2, 3, 4 and 5 as described in the paper.

The operation of the camera requires the steady position of the patient's eye, a widely dilated pupil, at least six millimeters, a constant amperage, with about 1/10 to 1/5 seconds exposure of the plate. It is impossible to obtain a better picture than can be seen with the ophthalmoscope.

The most striking feature of the fundus, both in ophthalmoscopy and photography, is the optic disc. We note its color, shape, size, margins, central excavations and condition of blood supply. To the temporal side of the nerve head in the normal eye is observed the macula, a round dark area, and in the center, generally a bright dot, or fovea reflex.

The fundamental points to observe are the character of the general blood supply of the retina as in caliber of vessels, reflex, tortuosity, depressions, sclerosis and distribution; finally, the remainder of the field, as pigmentation, hemorrhage, retinal density, choroidal vessels and sclerosis.

(A) Upon the examination of the fundus with the ophthalmoscope, various light reflexes are seen and recognized. As

Case 1. Patient, Miss M.

Shows a normal fundus, vision 20/20. A few light reflexes are present near the middle of the picture. It is natural the temporal section is paler because the nerve fibers are fewer and thinner than those on the nasal half. There is no difficulty in observing which are the arterics and veins.

Case 2. Patient, Mr. S.

O.D.—Vision 20/200. O.S.—Vision 20/20. A "V" shape reflex is between the disc and macula with apex directed to the disc.

The two small dark spots in the center are the result of an india ink spot on the camera lens to block a large light reflex. The macula has a brilliant white dot in the center. It is observed that the arterics are moderately tortuous, while the veins are straight.

Case 3. Patient, Mrs. C., age 53.

Two weeks before examination blurring in the left eye was noticed. The Wassermann and urine were found to be negative, with a blood pressure of 170. O.S. vision, 20/80.

Ophthalmoscopically the picture presents a paleness of the disc, the blood vessels constricted, with changes in caliber. There are clearly observed the large mass hemorrhage in lower temporal area, and a developing optic atrophy.

Case 4. Patient, Mr. O., age 46.

Two months ago blurring in vision of both eyes was noticed. He gave no history of sickness. Examination—sinuses clear, tonsils four plus, teeth negative, blood pressure 180. The urine reveals a heavy amount of albumin. Vision, O.D. 20/50, with correction, vision 20/30.

The stereo photographs reveal an optic neuro retinitis with marked edemas of the lower quadrant of the disc. The vessels are elevated and partly disappear near the disc. The remainder of the disc is completely obscured and the nerve head ophthalmoscopically appears as a red blur. The veins are engorged and slightly tortuous.

The white plaques are superficially situated, well defined and non-pigmented. The "star" does not completely encircle the maculae. The rays are small, short, linear, rounded whitish spots, while the arteries are constricted and partly obscured in the swollen retina. This patient's other eye shows a similar condition.

Case 5. Patient, E. J., age 30.

There is noticed a slight disturbance in the sight of the right eye. Vision, O.D. 20/20, with correction, 20/50.

The field shows the blind spot twice the normal

size. The head of the optic nerve forms a mound-like projection, rising one millimeter above the level of the fundus. The central cup of the disc is very shallow.

The swollen tissue of the nerve compresses the retinal vessels, resulting in narrow arteries. The veins are darkened and dilated with moderate tortuosity.

Folds in the retina are observed between the disc and the maculae area.

Pictures taken three weeks later showed a slight connective veil over the center of the disc.

Conclusion.—Photography adds to the interest of the fundus study. As in other fields, the effort at times may be disappointing, but again, with a good picture, the result is gratifying.

TRAUMATIC RUPTURE OF THE PANCREAS: REPORT OF A CASE*

HENRY K. RANSOM, M.D.
ANN ARBOR, MICHIGAN

Any type of injury to the pancreas is uncommon. Excluding the injuries due to penetrating and gunshot wounds, we find that most of the injuries to the pancreas from blunt force are associated with other visceral damage such as injury to the stomach, liver, spleen or bowel. In 1930, Stern in a careful review of the literature was able to find but twenty cases in which the injury produced by blunt force was limited to the pancreas alone. Of these twenty cases, in fourteen there was actual vertical or transverse rupture of the pancreas and in one fragmentation of the organ. The protected position of the pancreas, being deeply placed as it is within the abdominal cavity, with the stomach and intestines lying in front of it, undoubtedly explains the rarity of pancreatic injuries. However, its fixity, particularly of the head and body, together with the fact that these parts lie directly in front of the first and second lumbar vertebrae, explain how with a properly directed blow it may be caught between the striking object and the vertical column, resulting in either a complete tear of the gland or a more diffuse bruising or crushing of its substance.

A case of uncomplicated complete vertical rupture of the pancreas at the junction of the head and body has recently come under my care, and on account of the extreme rarity of such a condition it has seemed worth while to report it in detail.

The patient (E. M., No. 274741), a young man of twenty-eight, was brought to the surgical clinic as an emergency on the afternoon of January 11, 1932, with a history of having been in a fight on the morning of the same day. At this time he sustained injuries to his abdomen and chest. At noon he commenced to vomit and abdominal pain, tenderness and distention developed. The vomitus had not been fecal in character. Examination revealed

an acutely ill young adult male complaining of severe pain in the lower chest and abdomen and frequently vomiting yellowish slimy material. There were several superficial abrasions and bruises on the lower part of the thorax and upper abdomen, both anteriorly and posteriorly. One mark in the left upper quadrant bore the print of the heel of a man's shoe. The examination of the head and neck was not remarkable. The thorax was symmetrical in outline and expanded equally on both sides on respiration. The respirations were normal in character and rate. The heart sounds were regular but faint and no cardiac murmurs were present. The pulse rate was 100, blood pressure 94/30. The lungs were resonant throughout to percussion, the breath sounds were vesicular in character, no râles were heard.

Abdomen.—There was marked abdominal distention with generalized muscular rigidity which was more marked on the right side. There were no areas of dullness to percussion and no masses were palpable. The area of liver dullness was not absent. There was acute abdominal tenderness which was most marked in the epigastrium. No fluid wave. There was a left inguinal hernia which appeared as a mass about the size of an orange and which was not reducible. There was, however, no tenderness over this hernia mass and the overlying skin was normal in appearance. The rectal examination was negative. Extremities: No gross evidence of fracture or other lesion of the bones. Tendon reflexes normal, no Babinski. Temperature on admission 99.9°. Laboratory examination: The urine showed a trace of albumin but was otherwise negative. Hemoglobin 110 (Sahli), white blood count 25,000. An X-ray examination was made of

*From the Department of Surgery, University of Michigan.

the chest. This showed the diaphragm to be normal with very slight elevation on the right. The character of the costophrenic gutter was not unusual, there was some suggestion of moderate hilar thickening of long standing, probably due to recurrent upper respiratory infections but no evidence of injury to the thorax.

Of the various diagnostic possibilities to be considered, perforation of some hollow abdominal viscus seemed the most probable, while the possibility of intra-abdominal hemorrhage had to be entertained. That we might be dealing with a strangulated hernia seemed possible though not probable. The absence of blood in the urine and the normal findings by the hydrostatic test of introducing boric acid solution into the bladder through a catheter with ability to recover the full amount seemed to rule out a bladder rupture. A tentative diagnosis of rupture of some portion of the intestinal tract or possibly of the stomach was made. The moderate degree of shock and evidence of a generalized peritonitis were all in accord with this view. Operation was accordingly advised and this was done about two hours after his admission to the ward. During this interval an intravenous administration of 5% dextrose solution and normal saline was given. The operation was performed under nitrous oxide and ether anesthesia. A lower midline incision was first made. On opening the peritoneum there was a gush of bloody fluid from the abdominal cavity. There was no escape of gas and no evidence of contamination with intestinal contents or of peritonitis. The bleeding seemed to be coming from the upper abdomen and particularly from the right upper quadrant. On palpation, the liver, kidneys and spleen were found to be intact. Accordingly an upper midline incision was then made for more thorough inspection of the region of the liver. On inspection, the liver and gall bladder were found to be normal. The gastro-

hepatic omentum showed evidence of hemorrhage with a large hematoma which extended onto the stomach wall underneath the serosa. There was a large rent in the lesser omentum with several areas of pancreatic fat necrosis in the neighborhood. On separating the edges of this tear the pancreas could be both seen and palpated and it was found that the head of the pancreas had been practically severed from its body. The line of rupture was fairly clean-cut, almost as though it had been divided with a knife. It was from the torn edges of the pancreas that the bleeding originated. The blood was aspirated and after partial control of the hemorrhage by suture the bleeding was finally controlled by the introduction of a gauze pack and alongside of this, two cigarette drains. It seemed that the main pancreatic duct must have been divided and the treatment by thorough drainage ordinarily carried out for acute pancreatitis was in order. The patient's condition at the conclusion of the operation was fair although during the next few hours it became poor. His systolic blood pressure was 50 and his appearance cyanotic. A blood transfusion of 400 c.c. was given with the result that the systolic pressure rose to 80. The patient was placed in an oxygen tent. The following day his condition was unimproved, the systolic pressure had risen to 90 but the pulse was weak and thready with a rate of 140, and the temperature had risen to 104° F. There were some scattered râles in both lungs. In the afternoon a blood transfusion of 600 c.c. was given with temporary improvement. The systolic pressure after this transfusion rose to 132, only to drop again in a few hours while the pulse became exceedingly rapid and weak. Stimulants such as caffeine and adrena'in had no effect and he died at 7:20 P. M. An autopsy could not be obtained.

POST VACCINAL MYELITIS

Thomas William Brockbank, Washington, D. C., calls attention to the fact that the acute inflammatory lesions of the nervous system reported as occasionally following vaccination against smallpox usually have presented the clinical symptoms of encephalitis or polioencephalitis. In cases with paramount spinal cord involvement, even when the lesions accompany smallpox itself, the sensory impairment has been negligible or transient. As a contrast to this generally accepted picture, he reports a case

of postvaccinal myelitis with complete spinal anesthesia persisting up to the level of the ninth dorsal segment and paralysis. The clinical and laboratory signs of spinal meningomyelitis are presented. The sensory level seemed to indicate that the inflammation in the acute stage had progressed only to the level of the fifth dorsal segment, although motor signs pointed to mild inflammatory involvement in segments considerably higher. The sensory level two months after onset was in the eighth dorsal segment. The prodromal symptoms began on the thirteenth day after vaccination.—*Journal A. M. A.*

FAMOUS MEN IN MEDICAL HISTORY

SAMUEL D. GROSS

By LAWRENCE D. DICKEY, A.B., M.D.

It is our purpose to consider American Surgery as it was represented by Samuel D. Gross. He was, for fifty-four years (1828-1882), an active practitioner of medicine and surgery, and, for forty-two years (1840-1882), a public teacher of surgery. Gross was in practice for eighteen years before the introduction of anesthesia. The last six of these he was Professor of Surgery at Louisville, Kentucky. In 1882, ten years after Lister visited Philadelphia, he was still active and considered the leading surgeon of the time. We thus see that the surgical life of this man occupied a period which witnessed the greatest advance surgery has known. Pain had been done away with and suppuration was no longer inevitable.

"American surgery in the pre-Listerian period was distinguished principally by a great deal of bold operating on the vascular and osseous systems, by the foundation of modern operative gynecology at the hands of McDowell and Sims, and by the permanent introduction of surgical anesthesia. Its leading representatives in this period were Physick, the two Warrens, Post, Mott, Gibson, the two Smiths, Willard Parker, McDowell, and Sims." Gross also represented this period as well as the one that followed.

Gross's life previous to 1840, at which time he became Professor of Surgery at Louisville, showed how well qualified he was to fill this professorship.

Samuel David Gross was born July 8, 1805, near Easton, Pennsylvania. His parents were of German descent. Early, at about the age of six, he had the desire of becoming a doctor. When fifteen years of age he set to work to prepare himself for the study of medicine.

At seventeen, considering himself competent to commence the study of medicine, he entered the office of a country physician, but got little aid so tried another with no better luck.

"They had none but old, if not obsolete, books; they were constantly from home, never examined me, or gave me any encouragement. With the aid of Fyfe's Anatomy and a skeleton, I learned some osteology; but even this was up-hill business, and

I at length gave up in despair. I found that my Latin was inadequate, and that I could not understand the technicalities of medicine without some knowledge of Greek. With some degree of hesitancy, lest I should give offense, I disclosed my feelings to my preceptor, and much to his honor, he at once released me from any obligations to serve out my term of study. *This was the turning-point in my life.* . . . I had made a great discovery—a knowledge of my ignorance; and with it came a solemn determination to remedy it."

For a year he attended the Academy at Wilkesbarre, then for six months a school in New York, then back to Easton for six months' tutoring, but became restless, and went to the High School in Lawrenceville, New Jersey, for six months, thus completing his course of study toward the end of the year 1824. These many changes in schools were the result of difficulties with his guardians, who did not furnish him with enough money, although his father had left sufficient.

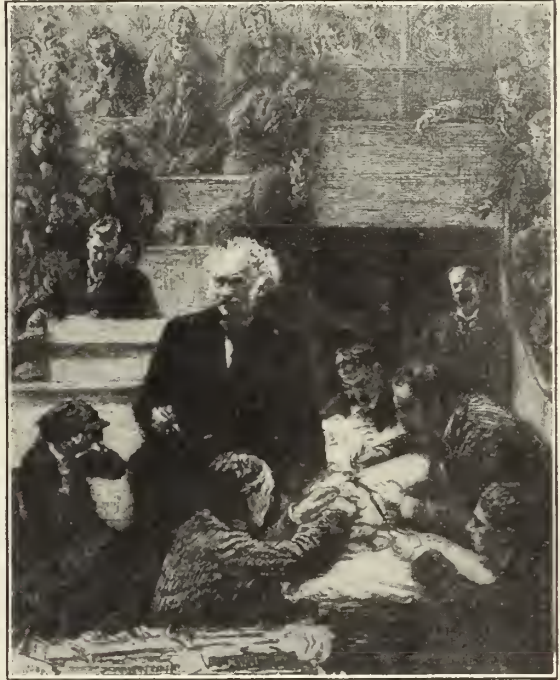
"I was nineteen years of age," said Gross, "when I commenced in earnest the study of medicine. My preceptor was Dr. Joseph K. Swift, of Easton, a graduate of the University of Pennsylvania, and a practitioner of some note, with considerable pretension to scientific knowledge, and a deadly hatred of quackery. The understanding was that I was to remain under his tuition for three years, inclusive of two lecture terms, and that he was to receive, as an office fee, two hundred dollars, for which he was to furnish me with the use of certain books, and to examine me once a week on such branches as I might be studying. His library was small, and its contents of little value. He had no apparatus of any kind, plates or diagrams, no specimens in materia medica, or anatomical preparations; nothing, in short, but a skeleton, and this, with the aid of Wistar's Anatomy, was the first thing I set about to master. In less than two months I had accomplished my object; I knew pretty well every foramen, prominence, and suture, and was complimented upon my progress. I then went to the ligaments and muscles, and at length to the viscera, and of course learned little. From anatomy I went to surgery, then to materia medica, and finally to midwifery and the practice of medicine. The works on these subjects that were put into my hands were Dorsey's Elements of Surgery, Chapman's Materia Medica and Therapeutics, Burns's Midwifery, edited by James, and Thomas's Practice, edited by Hosack. Chemistry I did not study, being told that it could not be learned out of the lecture-room without the aid of experiments, and no assertion, I am sure, is more true. I was generally examined on Saturday, and it is due to preceptor and pupil to say that they were always punctually at their post. From an hour to an hour and a half was usually consumed in this way; the book which I was engaged in reading being always spread out on the table before my 'master'. I need not say that this was a dry and

unprofitable mode of studying medicine; it was acquiring knowledge under difficulties; it was a waste of precious time; and I was therefore glad when the period arrived for attending lectures. I was eager for a new field, where I might obtain some substantial information, and some remuneration for my pains. I had all along felt that, like Sisyphus, I was engaged in rolling stones up hill, and doing myself no good beyond the slight reputation I gained as a devoted student. Besides, I had seen no practice; my preceptor was not popular, and few of his patients could be visited by an 'unfledged doctor'. Swift, I am sure, took an interest in me; but it soon became apparent to me that such instruction as I was receiving from him had little value, and fell far short of what a student had a right to expect from his preceptor. Perhaps, however, this was not his fault, but the fault of the vicious system of office pupilage, still prevalent in nearly all sections of this country, a system which cannot be too pointedly condemned."

In October, 1826, he arrived in Philadelphia to attend the course of lectures. Swift wanted him to go to the University of Pennsylvania, his Alma Mater, but Gross was attracted by the brilliant work of Dr. George McClellan, the Professor of Surgery at Jefferson Medical College, so he entered there. For eighteen months he was a private pupil of McClellan's and did not return to Dr. Swift. McClellan was the founder of Jefferson Medical College and gave lectures on both anatomy and surgery. "McClellan was an enthusiast," and had a profound influence upon his young pupil for, as Gross says, "I soon became passionately fond of dissections and thenceforth made practical anatomy a special study." Surgery also received his enthusiastic attention. In referring to his student days he says, "After all, everything depends upon the student himself, his industry, his habits of attention, his culture, and his natural capacity. His knowledge must come chiefly through his own personal exertion. Lectures, however able, are only aids. They never can make a good physician or a great man out of a dunce." In 1828 he graduated after eighteen months of study and his thesis was entitled, "Nature and Treatment of Cataract," a subject which always deeply interested him.

He opened an office in Philadelphia and spent most of his time in translating foreign works. These works were: Bayle and Holland's General Anatomy, Hatin's Manual of Obstetrics, Hildenbrand on Typhus Fever, and Travernier's Operative Surgery (1829). The latter "was the first treatise on operative surgery ever published in the United States." This was the last translation he ever made. In 1830 his first original work

appeared, entitled, "The Anatomy, Physiology, and Diseases of the Bones and Joints." All these were published in about eighteen months after he took his degree, and, as he remarks, "I labored day and night



"THE GROSS CLINIC"

(Reproduced from the famous painting by Thomas Eakins, now in the possession of Jefferson Medical College.)

under the stimulus both of ambition and of poverty."

About that time he married and moved to Easton, his old home, where he remained for about two and a half years. While there he obtained a cadaver, constructed a dissection room and devoted himself diligently to dissection. He also had an ardent desire in his professional youth to become an experimentalist, both with a view to throwing light upon certain obscure points in physiology, and to earning some reputation. His first investigation was of the temperature and coagulation of the blood and he found that the average temperature of venous blood was 96°F. and not 98° as recorded in the books. Next on urinary excretion, to ascertain the rapidity of transit of substances taken into the stomach. Then, in connection with a legal case, some investigations upon manual strangulation.

In the summer of 1832 Asiatic cholera appeared on the American continent for the first time. Gross was chosen, by his com-

munity, to go to New York and study the situation. In the hottest of July weather he spent three weeks there, but learned little. He found "empiricism reigning with unlimited sway. Some used inunctions of mercurial and capsicum ointment, with calomel, camphor, and capsicum internally," and seemed to get good results.

In reviewing medicine as it was practiced in Easton at that time he says, "Upon one thing all were agreed: they all bled, all gave emetics, all purged, all starved their patients. They were all real Sangrados, mowing down alike the infant, the youth, the adult, and the old man. Tartrate of antimony and potassium was the favorite emetic, calomel and jalap the accepted cathartic, and water-gruel or panada the common fever diet." Fifty cents was the fee for a town visit, and 12½ cents for bleeding or the extraction of a tooth.

In October, 1833, he moved to Cincinnati. Here through the influence of Dr. John Eberle he had obtained the position of Demonstrator of Anatomy in the Medical College of Ohio. He gave three lectures a week, chiefly on surgical and visceral anatomy. Thus he laid the foundation for the study of practical anatomy, which was, "up to that time, a nominal matter in the Western States."

In 1835 Daniel Drake founded the Medical Department of the Cincinnati College with a chair of Pathological Anatomy, the first of its kind. Gross was unanimously appointed, by the trustees, to this chair. The school remained in operation until 1839, when it was disbanded. By this time he had a considerable medical and surgical practice, which in the year preceding October, 1840, had brought him in \$9,000.

He published his great work entitled, "Elements of Pathological Anatomy," in 1839. His own comment is, "As far as I know, mine was the first attempt ever made in this country, or, indeed, in the English language, to systematize the subject and to place it in a connected form before the profession." The work took three years in its preparation, and went through three editions. "There is one feature of this book which is worthy of special notice. I refer to the fact that the description of the morbid anatomy of every organ in the body was preceded by an account of its healthy color, weight, size, and consistence, founded upon

original observation, a plan until then unknown in such works."

During the year 1839 he was appointed Professor of Medicine in the University of Virginia, and offered the chair of Anatomy in the University of Louisiana at New Orleans. He declined both.

This was the story of his life at the time he became Professor of Surgery in the University of Louisville, Kentucky. He was thirty-five years old and full of enthusiasm and ambition. Grounded as he was in anatomy, pathology, and physiology, he had an ideal background for the teaching of surgery.

In October, 1840, he went to Louisville to begin his life as a surgical teacher. Early during his residence in Kentucky he carried out further experiments with dogs on the nature and treatment of wounds of the intestines. Things went well in Louisville and his practice grew until, about 1850, he "had a more commanding surgical practice than any man in the Southwest." About this time affairs at the college became uncertain, so when offered the chair of surgery in the University of the City of New York he accepted it.

He spent the winter of 1850-51 in New York as the successor of Valentine Mott. The leisure time of that winter he used to finish his treatise on the Urinary Organs which was published in 1851. This work was much needed and at once became accepted as authority. A second edition appeared in 1855 and of it he says: "In the appendix is the first and only attempt ever made by any writer, as far as I am aware, to furnish a complete account of the prevalence of stone in the bladder and of calculous disorders in the United States, Canada, Nova Scotia, Europe and other countries." This piece of original research had been carefully carried out and he was much disappointed to find that it attracted but little attention.

At the end of the year he resigned and returned to Louisville, which he considered had the best school. The next great work he produced was a treatise on Foreign Bodies in the Air-passages. "It was the first attempt to systematize our knowledge upon the subject, and the work is, therefore, strictly speaking, a pioneer work." Dr. Morell Mackenzie, nearly thirty years after, made the following remark: "This invaluable essay gives full reports of 200 cases,

and is so complete that it is doubtful whether it will ever be improved upon."

Along with other great American surgeons of the pre-Listerian period he made his contribution to the surgery of the vascular system. In an article which appeared in the *Western Journal of Medicine and Surgery* he said: "Among my earliest papers was an account of a case of axillary aneurism, for which I had tied the subclavian artery. It was accompanied by a statistical notice of all that had been done in regard to the surgery of this vessel up to that period. My case was almost unique, only one similar case having occurred previously."

In 1851 he wrote a paper dealing with the history of Kentucky Surgery in which he established priority for Ephraim McDowell as the originator of ovariectomy.

In 1852 he sent to the Philadelphia Medical Examiner a short account of the use of adhesive plaster in the treatment of fractures, in which he says: "I proved that I had been the first to describe the method in my work on the Diseases of the Bones and Joints issued at Philadelphia in 1830. The method had been claimed by a number of physicians, none of whom were entitled to it. It was first practised by Dr. Joseph K. Swift, of Easton, my early preceptor, in a case of compound fracture of the leg in an Irishman, whom I saw several times during his protracted confinement. I was so much pleased with the plan that I briefly described it in my work. Swift himself never published any account of it."

In 1856 at the meeting of the American Medical Association in Detroit he read a paper on the "Causes which Retard the Progress of American Medical Literature." Thus, as well as in other ways, he did his share in building up the medical literature of our country.

His alma mater, Jefferson, elected him Professor of Surgery and he accepted. In September, 1856, he took up his residence in Philadelphia, where he spent the remainder of his active life until his resignation in 1882. Shortly after he arrived in Philadelphia he received the news that half, approximately 2,000 volumes, of his library which he had left in Louisville had been destroyed by fire. Of the incident he says, "I regretted the disaster so much the more because it involved the loss of the finest and most extensive collection of books on the genito-urinary organs which had ever been

brought together in this country. Many of the books were from the library of the late John C. Crosse, the eminent lithotomist, of Norwich, England, and can never be replaced."

Along with Dr. J. M. DaCosta he founded the Philadelphia Pathological Society in 1857, and was its first president. Also during these early days in his new location he set to work to finish his system of surgery which he had determined to make, if possible, "the most elaborate, if not the most complete, treatise in the English language." It was published in 1859.

The remaining events and contributions of his life are too numerous to warrant more than mention of the most outstanding. In 1867 he was president of the American Medical Association; in 1869 he read a paper on the Training of Nurses, the first of its kind in the United States; in 1876 he was president of the International Medical Congress in Philadelphia; in 1879 founded the Philadelphia Academy of Surgery; and in 1880 founded the American Surgical Association. He was the first president of each. He resigned his chair of surgery in 1882, but remained active, especially in medical societies and in writing, until his death, May 6, 1884.

Gross did more than practically anyone else to make American surgery respected in Europe. Juettner in his account of "Daniel Drake and his Followers," remarks: "No American physician has ever been honored in Europe like S. D. Gross. He visited Europe several times and everywhere the princes of intellect, the mighty ones in the realm of science, vied with each other to do him honor."

To sum up Gross's contributions to surgery other than what has already been mentioned I will quote the following from his autobiography.

"Deep stitches in wounds of the wall of the abdomen, to prevent hernia or protrusion of the bowel after recovery. As far as my reading extends I know of no work on surgery in which this subject was placed in its true light, or, indeed, any light prior to the publication of my monograph on wounds of the intestines. Of course every surgeon speaks of it now.

"The invention of an enterotome for the treatment of artificial anus, intended to supersede the clumsy contrivance of Dupuytren.

"A tracheotomy forceps, for the extraction of foreign bodies from the air-passages, favorably mentioned by writers on surgery.

"Wiring the ends of the bones in dislocations of the sterno-clavicular and acromio-clavicular joints, taught originally in my lectures in the University

of Louisville soon after I took charge of the chair of Surgery in that school.

"An arterial compressor—a peculiar pair of forceps—for arresting hemorrhage in deep-seated vessels not accessible to the ligature or amenable to torsion or acupressure, as in the perineum after lithotomy.

"An instrument for extracting foreign bodies from the nose and ear, found in nearly every pocket-case in the country.

"Laparotomy in rupture of the bladder.

"Direct operation for hernia by suturing the pillars of the ring.

"Apparatus for the transfusion of blood.

"First account of prostaticorrhea.

"Description of a new form of neuralgia of the jaws in old persons.

"Pododynia, a disease of the foot, first described by me.

"The propriety of amputating in senile gangrene has long been a disputed question. If the operation be ever proper, and there are certain cases in which it is, it should invariably be performed, as I have reason to believe I was the first to teach, at a great distance from the seat of the disease, after a very perfect line of demarcation has formed."

Gross was a voluminous writer, prided himself on being "a teacher of principles," and considered himself a better physician than surgeon. The following statement from his paper on "A Century of American Surgery" serves to illustrate the broader application of this last consideration:

"Although this paper is designed to record the achievements of American surgeons, there are, strange to say, as a separate and distinct class, no such persons among us. It is safe to affirm that there is not a medical man on this continent who devotes himself exclusively to the practice of surgery. On the other hand, there are few physicians, even in our larger cities, who do not treat the more common surgical diseases and injuries, such as fractures, dislocations, and wounds, or who do not occasionally perform the more common surgical operations. In short, American medical men are general practitioners, ready, for the most part, if well educated, to meet any and every emergency, whether in medicine, surgery, or midwifery. Of late, the specialists have seriously encroached upon the province of the general practitioner, and, while they are undoubtedly doing much good, it is questionable whether the arrangement is not also productive of much harm. The soundest, and, therefore, the safest, practitioner is, by all odds, the general practitioner, provided he is thoroughly educated, and fully up to his work."

Finally of his position in the profession he says:

"The only genius I possess is the genius of industry; if I have any other, I have not been able to discover it. The position which I have attained in my profession has been achieved by hard blows, by no special intellectual endowment, by no special gifts from God; by no special favor from man, but by my own unaided efforts, continued steadily and perseveringly through a long series of years, during which a kind Providence afforded me sound health, lofty ambition, and unflinching fidelity to my profession."

MICHIGAN'S DEPARTMENT OF HEALTH

C. C. SLEMONS, M.D., Dr.P.H., Commissioner
LANSING, MICHIGAN

MORTALITY RATES FOR 1931

Report from the Bureau of Records and Statistics on the 1931 mortality rates shows marked reduction in diphtheria, tuberculosis, typhoid fever, diarrhea and enteritis, and pneumonia, and increases in cancer, diabetes and heart disease. The infant mortality rate dropped, while maternal mortality remained the same.

The following brief table gives the 1931 rates, with those for 1921 and 1930 for comparison:

	1921	1930	1931
Diarrhea (under two years).....	43.0	14.5	9.4
Diphtheria	25.2	6.2	3.5
Tuberculosis (all forms).....	72.3	60.1	53.9
Typhoid Fever.....	7.5	1.8	1.5
Pneumonia (all forms).....		68.6	58.5
Cancer (all forms).....	87.3	91.3	93.5
Diabetes		18.2	19.3

Heart (all forms).....	205.4	207.0
Infant Mortality.....	79.0	62.8 57.1
Maternal Mortality.....	6.3	6.0 6.0

OUTBREAKS OF TYPHOID FEVER

In the March issue of the Michigan State Medical Journal, mention was made of the outbreak of typhoid fever in Bay City, in which there were 10 cases occurring among guests at a Polish wedding. Since that time there have been two other small outbreaks of this disease in the state.

The first of these occurred in Monroe. Here there were nine cases reported, and several others on which definite diagnoses were not made. These cases had onsets occurring during the first two weeks of February. The cases all occurred in homes in one small locality on the outskirts of the

city of Monroe. Families living in these homes all used water from one well. The source of infection was traced to a carrier living in a house on the property on which the well in question was located. The cess-pool on this property was found to be overflowing and was located within 15 feet of the well. There was a hole in the casing of the well, below the surface of the ground.

The second of these epidemics occurred in Yale and was milk-borne. Fifteen cases were definitely diagnosed and traced to the common source, which was a carrier who had infected the milk supply. The carrier has been located.

In each of these two epidemics and also in the Bay City outbreak, the carrier responsible has been found. These three carriers have been responsible for at least 35 cases, and perhaps as many as 50. They will be kept under observation by the local and state health authorities and it is not likely that we shall have any more outbreaks traceable to them.

These outbreaks are all too striking a demonstration of the truth of statements made in these columns previously. The three or four hundred cases of typhoid fever occurring annually in Michigan are for the most part due to carriers. In the prevention of this "residual typhoid" the question of the mode of transmission is neither so important nor so fundamental as the question, *who* is the carrier responsible? Occasionally within a family we have several cases. In such an instance it is common to find that the first case has been the probable source of infection for the subsequent cases; but these first cases in families and the single or sporadic cases are, like the cases in the outbreaks referred to, due to carriers.

It is important to make all our water and milk supplies as safe as possible from contamination of any kind, but in the control of the typhoid now remaining it is of first importance to find and control the individuals who are contaminating our private water supplies, our milk, and our food. The search for carriers should be relentless. Physicians in practice have been and can be of great assistance in this search.

C. D. B.

ALLEGAN COUNTY HEALTH UNIT

One more county health unit has been added to the list, making a total of 29

counties in Michigan that have full-time service by qualified physicians. The last unit to start functioning is that of Allegan County, which began work on April 1.

Dr. A. B. Mitchell is Director of the Unit. Dr. Mitchell has completed the course in the Michigan Department of Health Training Station for Health Officers.

The new unit has offices in the Court House in Allegan.

ANTIRABIC VACCINE

Beginning May 1, 1932, the bureau of laboratories of the Michigan Department of Health will add Antirabic Vaccine (Cumming) to the list of biologic products distributed free to physicians of the state.

Dr. G. W. McCoy, Director of the National Institute of Health, visited the bureau of laboratories during March, to make the annual inspection required by the federal government of the manufacture of biologic products for interstate commerce. Dr. McCoy gave complete approval of processes now employed and made several suggestions for improvement. He also approved the new Antirabic Vaccine (Cumming) which will be distributed beginning May first.

CHILD HYGIENE ACTIVITIES

The series of Women's Classes conducted for six weeks by Dr. Ida Alexander in St. Clair County has been completed. An enrollment of 1,132 women took the work. Dr. Alexander began a similar series of classes in Ottawa County on March 21.

The Ingham County Women's Classes conducted by Dr. Muriel Case with an enrollment of 1,465 have ended, and Dr. Case, assisted by Helen Linn, R.N., nutritionist, is carrying on a similar series in Kent County.

Bertha Cooper, R.N., completed her series of Child Care Classes in Van Buren County and is now working with the girls in Monroe County schools. Beatrice Ferriby, R.N., is conducting Child Care Classes in Kalamazoo County since the completion of her classes in Osceola County. Similar classes are being carried on in Hillsdale County by Nell Lemmer, R.N. Annette Fox,

R.N., has completed a series of classes in Dickinson County and is now assisting in organization work in the southern part of the state.

Diphtheria immunization work in Lapeer County carried on by Dr. Edna Walck and Esther Nash, R.N., has been completed.

Julia Clock, R.N., is coöperating with the Bureau of Epidemiology, in making a survey of final results of recent infantile paralysis cases.

PARENTERAL USE OF LIVER EXTRACT IN PERNICIOUS ANEMIA

WILLIAM P. MURPHY, Boston, treated thirty patients with pernicious anemia by means of liver extract administered parenterally. The extract may be administered easily and safely either with or without hospitalization of the patient and with the greatest assurance of success. Improvement in the blood is even more rapid and striking than that to be expected from the ingestion of much larger doses of liver or potent liver extract. Treatment was followed by an increase in the reticulocytes (young red blood cells) generally within a shorter period than occurs after treatment by mouth, and the numbers of the erythrocytes have increased promptly in practically all cases treated, even in those patients who were considered to be somewhat resistant to improvement to liver or extract given orally. There was a prompt and often very striking increase in the numbers of the white blood cells and blood platelets within a few hours of the beginning of treatment and a continuance of a normal or slightly elevated level during the course of treatment. Symptomatic improvement occurred after parenteral treatment, as is to be expected following the satisfactory oral use of liver or liver extract, although the improvement in general well-being of the patient possibly occurred sooner after the onset of treatment than when oral treatment is used. Improvement in symptoms resulting from the spinal cord damage was striking in those patients whose treatment had been most satisfactorily carried out. The extract was administered to the series of patients without a reaction of importance. It may be advisable, as has been done in some of the patients with whom this report deals, to test all cases with one or more small preliminary injections, in order to avoid the possibility of a severe reaction in the rare patient who may be hypersensitive to the liver. The most satisfactory use of parenteral treatment is the intramuscular injection of large or optional amounts of the liver extract (extract prepared from 300 to 400 Gm. or more of liver) during the beginning of the treatment of a patient in relapse. Subsequent and maintenance treatment may perhaps best be carried out by similar smaller injections at intervals varying from five to seven days, or even much less frequently in the uncomplicated cases. The exact interval must be determined by the condition of the blood and of the patient. Although the injections may be given daily, such treatment will rarely be indicated, and it has been generally less well received by the patient than treatment at less frequent intervals. The rapid effect, together with the ease and safety of administration of the extract, especially intramuscularly, makes it an invaluable means of treating the critically ill patient and may well

replace the use of either transfusion or stomach tube in the treatment of such a patient. The injection method of treatment should be a valuable substitute for the oral method in the patient who finds difficulty in the constant ingestion of a sufficient amount of liver material or whose gastro-intestinal tract is upset thereby, with resultant gas, discomfort or diarrhea. In the latter group the injections may be used permanently or for periods of a few weeks, alternately with liver or extract by mouth. In fact, such an alternation of methods may be desirable during the maintenance treatment of many patients who now find little or no difficulty with the oral regimen. Finally, mention is made of the economy possible through the use of parenteral extract as compared with the expense of either liver or liver extract administered orally.—*Journal A. M. A.*

RELATIVE VALUE OF INORGANIC AND ORGANIC IRON IN HEMOGLOBIN FORMATION

C. A. ELVEHJEM, Madison, Wis., describes experiments in which he demonstrated that, in the absence of copper, organic iron (hematin) is as ineffective as inorganic iron (ferric chloride) for the cure of nutritional anemia in rats. In the presence of copper, organic iron promotes a partial cure of the anemia in rats, but the regeneration is neither so rapid nor so complete as the recovery obtained when ferric chloride is used as the source of iron. The hemoglobin content of the blood of rats, which remained at from 6 to 7 Gm. per hundred cubic centimeters as long as hematin and copper was supplied, increased to 16 Gm. per hundred cubic centimeters in three weeks when ferric chloride was added to the diet. The iron content of the livers from the different animals demonstrates that the decreased activity of the organic iron is due to the inability of the rat to assimilate the iron present in the hematin molecule. The results of the experiments show that the limitations of liver in the cure of secondary anemias, which have been observed by different workers, is due to a lack of available iron. Liver itself does not supply large amounts of iron. One hundred grams of fresh beef liver contains only 8 mg. of total iron, and of this total a considerable amount is organic iron which is utilized to only a small extent. It is evident that further studies on the amount and quality of the iron present in food materials used for the treatment of secondary anemias are very necessary. In practice the limitation of such organs as liver as a source of iron should be borne in mind, especially if the cause of the anemia is a specific iron deficiency. Certain commercial preparations, highly recommended for the treatment of secondary anemia because of their large organic iron content, may also be deficient in available iron because the hematin compounds are not readily broken down in the digestive tract. The relatively small amount of inorganic iron in most food materials is a fortunate condition because, if inorganic iron, which is catalytically active in many oxidation processes, were present in large quantities, many of the valuable organic factors found in foods would be destroyed. Under ordinary conditions the animal organism can obtain sufficient iron from the directly available inorganic and the partially available organic iron in its food to supply the needs. It is only in those cases in which the normal iron supply has been interrupted that one must turn to an increased supply greater than that furnished by an average well balanced diet. When such additional iron is required, one must rely on iron compounds which are more available than hematin.—*Journal A. M. A.*

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MAY, 1932

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon

EDITORIAL

POST-GRADUATE OPPORTUNITIES

In the spring the progressive physicians' fancies turn to thoughts of post-graduate work to be pursued as intensively as his time and means will permit. The April number of this Journal contained (page 293) the annual announcement of the courses given under the auspices of the Department of Post-graduate Medicine of the University of Michigan. As the reader will see, a large portion of this work will be given in Detroit. The clinics of Detroit offer unlimited opportunity as the basis of post-graduate study. Regarding a function of the large

er American cities that may be well emphasized, Dr. Ray Lyman Wilbur* says:

"While I am deeply sympathetic with undergraduate medical school instruction, I do feel that certain cities of the United States should devote themselves to the training of physicians rather than the instruction of medical students. Experience has shown that medical students can be adequately handled in comparatively small communities and with small institutions, while only large centers can adequately deal with the difficult training of mature physicians. It is no longer effective for these physicians to come in contact with one great leader through lectures and demonstrations. That opportunity passed with the saddle bags. There is need of organization and systemization of the clinical, research and teaching opportunities. It is a great privilege for any teacher or any medical group to lead a medical student into the mazes of medicine, but it is a greater one to lead the active men and women of the profession to more adequate medical services."

We have emphasized from time to time the necessity of periodical contact with the great medical centers of the country. The work begun a few years ago by the department of post-graduate medicine of the University of Michigan in conjunction with the Michigan State Medical Society has brought opportunities for post-graduate study practically to our own doors. The profession has been appreciative of this fact by the response that has been made. In some of the courses offered last year, many more applied than could be accommodated. Perhaps the best way to combat the cultist and irregular practitioner, after all, is better qualification of the regular physician.

THE OWNERSHIP OF X-RAY FILMS

Of general interest to the medical profession and of particular interest to those devoting their time to X-ray diagnosis, is a decision by the Ingham County Circuit Court to the effect that X-ray films are the property of the hospital or the private X-ray laboratory in which the examination was made. This is the second time within the past two years in which such decision was made by a circuit court in this state, the first being that already noted in this Journal in connection with the Hurley Hospital of Flint. Apart from the legal aspect, X-ray specialists have felt that the interpretation is the all-important thing in connection with an X-ray examination and that the film or radiograph is simply the basis of the interpretation. Therefore the films or radiographs stand in about the same relation to the interpretation as any other data that would be

*Journal A. M. A., April 2, 1932, page 1210.

intelligible to the physician making them and to no one else.

In the recent decision at Lansing (April 4, 1932) Judge Carr's charge to the jury is as follows:

"Gentlemen of the Jury, this is rather an interesting case in some of its aspects. But as I view the situation it resolves itself into a question of law.

"Now it appears that these X-ray films were taken by Dr. Pinkham; he had them in his possession at the time that this action was instituted. There is, however, no showing in the case that these X-ray films at the time of the institution of the suit or at the present time had or have any intrinsic value whatever. Replevin lies to recover property that has value. It will not lie to recover something that has no value, and as I say there is no proof of value concerning these X-ray pictures or films.

"And then we come to the question, passing by this matter of failure to prove value, when X-ray films or pictures are taken by a physician is there any implied undertaking on the part of the physician taking such pictures that they will be turned over to the patient? The undisputed evidence in this case is to the effect that it is customary that such films be retained by the physician who has taken them—retained by him as a part of his record concerning the case; retained, I suppose, on the same basis and on the same theory that he retains his temperature chart that he has made or other record concerning the diagnosis or treatment of a case. That testimony stands undisputed on this record. I think it must be conceded that it establishes an uncontradicted custom touching and concerning the subject matter of this case. And that as a matter of law it must be said that where X-ray pictures are taken by a physician under the circumstances such as they were taken by Dr. Pinkham in this case, there is no implied undertaking to turn those films over to the patient.

"It becomes the duty of the court therefore to direct you to return a verdict of not guilty as to both defendants and the clerk will receive the verdict."

There has not been a supreme court decision so far as we can learn regarding the ownership of radiographs.

TUBERCULOSIS BACILLUS KNOWN FOR HALF A CENTURY

It is half a century since Robert Koch made the epoch-making discovery of the germ which causes tuberculosis. To be exact the date was March 24, 1882. Up to the time of the recognition and isolation of the causative factor of the disease, no scientific approach to the problem of its elimination was possible. Since that time we have travelled a long way in our methods of prevention and treatment of this disease which was at one time the chief cause of death. One person out of seven died of it, and if those were counted who died between adolescence and old age the number was as many as one out of three. According to present statistics compiled by

the National Tuberculosis Association one person out of seventeen dies of it.

While the discovery of the causative factor of tuberculosis was made only a half a century ago, the disease is one of the earliest to be recognized as an entity. Its symptoms were recognized and described by Hippocrates, but until modern times tuberculosis was considered incurable.

Jean Villemin (1865) was able to produce typical cases of tuberculosis in healthy animals by injecting tubercles from an animal afflicted with the disease. Villemin's experiments established the fact that tuberculosis is a contagious disease. No further progress was made, however, until in the fall of 1881 when Robert Koch set himself about endeavoring to discover the germ that causes tuberculosis. He felt very certain that consumption was a germ disease. Koch was aided in his work by the perfection of staining methods in the study of bacteria. With his alkaline solution of methylene-blue he was able to distinguish the hitherto unknown germ. All are more or less familiar with Koch's laws. The germ must be grown outside the body and then injected into healthy animals to see if it produces the disease. It must then be isolated from the animal in which the disease has been produced and grown again in pure culture. This he was able to do and thereby established his thesis.

The story of the discovery is interesting. Koch proceeded as he had done before with the anthrax bacillus by injecting it into the healthy animal. He then endeavored to grow the germ from the animal affected by the disease on different culture media, among them solidified blood serum. He incubated the germ in vitro for the usual period of time but found no growth. This might have ended his experimentation. However, he extended the time for a week, when he discovered small white spots on the surface of his culture media in the test tubes in which the virus had been planted on the blood serum. Examining these colonies he identified the bacilli as the same found in the tubercular lesion. These bacilli were again planted in healthy animals under various conditions and all were found to come down with the disease. Hence another great discovery.

Koch's discovery more than confirmed the work of Villemin to the effect that tubercu-

losis was an infectious disease and it also pointed the way to the precautions that must be taken to prevent its spread. In many parts of this State efforts are being made towards the still further conquest of this scourge. It would seem that we have arrived at such a stage that intelligent effort in the way of coöperation on the part of the lay population should go a long way towards the extermination of tuberculosis.

CONCERNING RECENT GRADUATES IN MEDICINE

It is always interesting to learn of the geographic location as well as the tendencies to specialize on the part of members of the medical profession. Dr. Weis Katten* of Syracuse has made a rather intensive study of the graduates of American and Canadian medical colleges for the year 1925, with some rather interesting conclusions. He notes a tendency for men to enter on the practice of medicine at a later age than in former years. This he explains by the increased pre-med and pre-graduation requirements and the fact that many men do not begin the study of medicine until they are past twenty-five years of age. There is a tendency, as seen among the 1925 graduates, to locate in the larger communities. It is said that 47.7 per cent of the population of the United States resides in communities of less than 5,000 inhabitants. We might expect the same percentage of doctors to locate in such communities. The percentage, however, is only nineteen.

There is a tendency (again based on 1925 graduates) for about one-half of the graduates to practice in the same state in which the college of which they are graduates is located, and for one-fourth to practice in the same city. Of the 1925 graduates this writer tells us that 99 per cent of graduates from American colleges practice in the United States, while only 59 per cent from the Canadian colleges practice in Canada. We presume that approximately 40 per cent of the graduates of the Canadian medical schools migrate to the United States. They come for post-graduate study in the various large American medical centers and do not return to Canada.

In regard to specialization, about 35 per

cent of the graduates of 1925 and also the graduates of 1920 of whom a similar study was made, limit their work to a specialty within six years after their graduation, while more than 70 per cent look forward to limiting their practice to a single specialty. One-half of those who specialize within six years do so without having had any experience in the general practice of medicine.

The writer notes that seventeen and six-tenths per cent of the graduates of both 1920 and 1925 were found to occupy full-time salaried positions within six years after graduation. The study of the 1920 and 1925 graduates may be taken as a cross section of the situation as it has obtained during the past ten or fifteen years. There is a large percentage on full-time salary, and a marked tendency towards specialization which may be accounted for by the fact that medical knowledge has become so extensive that it is not possible for one person to master satisfactorily more than even a small portion. Yet we feel that there is a dignified place for the up-to-date general practitioner. A few months ago it was our privilege to print in these pages an address* by Dr. Charles G. Jennings of Detroit in which he outlined a field for the physician in general medicine that might well absorb the energies of the most devoted and ambitious members of the medical profession. And lastly we note the continued urbanization of medical graduates. However, this study was made in connection with 1925 graduates and doubtless with the depression of more recent times, a similar study would show a disposition on the part of graduates to locate in smaller places where the overhead in connection with medical practice is much less, which in the end offsets diminished incomes.

ON ADVERTISING

We refer to the matter of publicity of medicines, drugs, apparatus, equipment and all the aids to the practice of medicine. It is done in several ways but particularly by advertising in medical magazines and by circularizing the profession. We believe that space in the medical magazine is by far the better method. Our reasons: firms advertising in medical journals have an exclusive medium. Those who rely on circulars to the

*Tendencies in Medical Practice Based on the Study of Graduates in 1925, by Weis Katten, Syracuse, N. Y., Journal of American Medical Colleges.

*See Journal Michigan State Medical Society, Volume 30, page 919, December, 1931.

profession are only part of a numerous group who fill the professional waste basket every morning with circulars advertising dubious investments and other get-rich-quick schemes which the doctor has long ago come to look upon as a nuisance which he has learned to ignore. There is an old jingle:

He who has something to sell,
And goes and whispers it down a well,
Is not so likely to collar the dollars,
As he who climbs a tree and hollers.

But this is not the kind of advertising we mean.

The writing of high grade advertising matter is an art which requires much study. It involves illustration and typographical arrangement that must prove pleasing to the eye; it must give the merits of the production in a brief, convincing way, but must avoid anything that would in the least savor of exaggerated or false statement. Turn to the advertisements in this Journal. The reader will find interesting descriptions of products ranging from drugs, foods, orthopedic appliances, books, to institutions providing special care for the sick.

WAVE LENGTHS

In these days of radio, and for the doctor radiotherapy, the following data in regard to wave lengths of the various rays will be of interest. Light rays range from the Hertzian through to the cosmic rays. Of these the solar spectrum comprises a small fraction. The Hertzian or radio waves are the longest. The longest radio waves are several miles in length, while the shortest are only .03 of a centimeter long. Next come the heat or infra-red rays, invisible to the eye but detectable by a thermometer or by the sensation of warmth. They are called infra-red because they precede the red rays of visible light. Their wave length ranges from .03 of a centimeter to .000078 of a centimeter. The infra-red rays begin with red light with a wave length of .00078 centimeter and end with violet light with a wave length of .000038 of a centimeter.

The ultra-violet rays, which range down to a wave length as low as .00000136 of a centimeter, the X-rays, ranging down to a wave length of .0000000137 of a centimeter, and the gamma rays of radium, the shortest having a wave length of .0000000002 of a centimeter, follow in the order named. The cosmic rays, the seventh known type of elec-

tromagnetic radiation, have the shortest wave length of all, some thousands of times shorter than the shortest gamma rays.

A BIT OF MEDICAL HISTORY

THE ALEXANDRIAN SCHOOL

From the time of the death of Hippocrates in 375 B.C. until the founding of the Alexandrian School in 331 B.C. not much real progress was made in medicine. There had been a good deal of philosophizing as we have seen by a number of post-Hippocratic cults. There were not, however, more than three or four men of the first rank. Diocles, already mentioned, was considered by Pliny to be "both in time and reputation next to and second only to Hippocrates." He was a keen anatomist, but, though said to be a prolific writer, not much of his work remains. Another important physician of the time was Praxagoras, a native of Cos, about 340 B.C. He was the first to recognize that pulsation occurred only in the arteries but maintained that the veins only contained blood; the arteries air. He came to this conclusion as the arteries were found empty after death.

Following the death of Alexander, Egypt came under the control of Ptolemy and under his wise rule Alexandria became one of the most important cities on the Mediterranean Sea. Ptolemy founded a museum which performed the function of a modern university. This institution developed under his successors so that the library contained more than half a million volumes, and teachers were attracted from all centers of learning in the ancient world. Among them were such men as Archimedes and Euclid the geometrician. Those of us who are in the sixth or seventh decade are more or less familiar with the Euclidian geometry of our boyhood. In mechanics, physics, astronomy and mathematics the work of the Alexandrian School forms the basis of considerable of our modern knowledge.

* * *

The first great medical school of antiquity was situated in Alexandria. The beginning of the Alexandrian School dates from 305 to 280 B.C. It should be understood that in spite of the fact that Alexandria is in Egypt there is no evidence that the physicians of this school had made any use of the medical doctrines of the earlier Egyp-

tians. The Alexandrian School carried forward the Greek tradition rather than the Egyptian; it was in everything essentially a Greek institution. An account of the work of the chief Alexandrian physicians has been preserved to us by Pliny, Celsus and Galen. The most distinguished names connected with the Alexandrian School of medicine are Herophilus and Erasistratus who lived during the fourth century B.C. They were the originators of dissecting. Galen was himself at a much later time a pupil of the Alexandrian School. Herophilus, the first scientific anatomist, was born at Chalcedon, a Greek city, but nothing is known of his early years. He was also the first to make important studies on the nervous system. He showed the relation of the larger nerves to the spinal cord and brain and was the first to distinguish between motor and sensory nerves. Both Herophilus and Erasistratus considered the arteries filled with air. Herophilus noted the difference between the cerebrum and the cerebellum. He was the first to describe the torcular herophili and the meninges of the brain. Among other anatomical discoveries he made must be mentioned the parotid and submaxillary glands, the pulmonary artery, the seminal vesicles, the prostate gland, the retina, the vitreous and the ciliary body. Herophilus also counted the pulse by means of a water clock and described the aortic and pulmonary valves, the chorda tendinae and the ramification of arteries and veins.

* * *

Erasistratus, his associate, was a native of the Island of Ceos near the coast of Attica. He too devoted much time to anatomy but particularly to physiology. Encouraged by the Ptolomies, the kings of Egypt, in the way of supplying all the human dissecting material, much progress was made. "They were permitted the bodies of criminals in order that in this way they might learn the location, color, shape, size, construction, hardness, softness, smoothness, nature of external surface, protruberances and recesses of the individual organs during life," for, "it is permissible to sacrifice the lives of a few criminals if many worthy persons may thereby be permanently benefited in health or their lives prolonged." Those opposed argued: "This practice is not only cruel, but useless, and at the same time it

derogates from the dignity of the Healing Art, which is intended to be a blessing and not a source of pain to man; for those in whom the abdominal cavity is first opened and then the diaphragm divided, die before it is possible to make the scientific examination 'during life' which constitutes, as it is claimed, the justification for this procedure."*

Of the work of Erasistratus it is recorded that it consisted in shedding new light on the lacteals, the valves of the heart and the nerves. He also wrote on the *pneuma* or the breath, to which he assigned the most important role in the maintenance of life. According to him the *pneuma* was drawn into the lungs through the trachea, thence to the terminals of the bronchial tubes, which conveyed it to the aorta, from which it was forced to all parts of the body—probably the earliest account of the physiology of respiration. Not much advance was made from this position until the work of Harvey appeared in the seventeenth century.

In methods of treatment he eliminated blood-letting except in rare cases, in spite of the fact that he considered plethora or excess of blood the chief cause of disease. Among the contemporaries and successors of Erasistratus blood-letting was an almost universal method of treating all manner of diseases. He did not favor the use of purgatives but is said to have had recourse to enemata and emetics with discretion. Fasting and abstinence and exercise were among his therapeutic methods. He practised surgery as well as other branches of medicine.

* * *

The followers of these pioneers receded from the examples of carefulness in research and boldness, particularly in surgical procedures, and fell into speculative medicine which led to the decline of the Alexandrian School. The result was the development of a number of medical sects—thirty-four in all. The school, according to Sir Clifford Allbutt, came to an end in its iatrosophical phase on the destruction of Alexandria by the Arabs in 640 A.D.

The decline of the School of Alexandria was practically assured with the absorption of Egypt into the Roman Empire (50 B.C.)

*From Puschmann, quoted by A. H. Buck in *The Growth of Medicine from the Earliest Times to about 1800*. The report that the Alexandrians dissected living men originated with Celsus, whose pronouncement was made 300 years after their day. The statement has not been confirmed by Galen.

and the extinction of the Ptolemaic dynasty with the death of Cleopatra (30 B.C.). Its continuance to the time of the destruction of the city by the Arabs was characterized by much restricted activity and almost no originality. Rome until its decline and fall was to be the mistress of the world.

* * *

Roman medicine before the Greek influence was much more primitive than one would expect of a nation that had attained such a high standard in other realms of thought. It was a mixture of medicine with magic and religion. Even with the advent of Greek medicine the Roman intellectual fields were comparatively unfertile so that the Latin races produced no physician of eminence. The earliest teaching of medicine in Rome by the Greeks was of a private character in which the instructor took his pupils with him on his visits. Then followed groups of eager students combined into colleges. The instructors received for their remuneration only the pupils' fees. Not until the eighth decade of the first century A. D. was medical teaching carried on at public expense.

The earliest medical work of merit in Latin was the *De re Medica* (A.D. 30) the work of Celsus. It was a compilation from the Greek. This work begins with a sketch of the history of medicine and ends with a section on surgery. It also discusses diet and therapeutics as well as disease, both external and internal.

The Romans produced no eminent physician, yet their genius for organization enabled them to develop to a high degree preventive medicine. Much attention was given to drainage and to sanitation. Rome was provided with sewers as early as the sixth century B.C. The *Cloaca Maxima*, the main sewer even at the present day, had its origin at that time. As early as 450 B.C. it was unlawful to bury the dead within the city walls. Julius Caesar, during the first century B.C., sought to encourage the development of the healing art by conferring citizenship on all medical practitioners. About the year 160 A.D. public physicians were appointed to attend the poor. It is natural to suppose the Roman physician filled an important place in the army. There was, however, complete subordination of the medical attendant to all army officers. No special encouragement was

given them in the way of ranking medical officers and they accordingly made no contribution to Roman medicine.

Rome's greatest contribution to medicine was the hospital system in keeping with her known genius for organization. The earliest Roman hospital was the military *valetudinarium* and from this early method of caring for wounded and sick soldiers there developed *valetudinaria* for the civilian population.

Note: For a full account of the famous Alexandrian School the reader may consult with advantage *Greek Medicine in Rome* by Clifford Allbutt, Chapter V; *The Growth of Medicine* by A. H. Buck; *An Introduction to the History of Medicine* by Cumston; *The Evolution of Modern Medicine* by Sir William Osler; *The History of Medicine* by Max Neuberger, Vol. I; and *A Short History of Medicine* by Charles Singer.

ODDS AND ENDS

The greatest school of all is the university of the world; the greatest teacher is experience; the greatest textbook is the book of observation; the greatest disciplinarian is a few hard knocks; but the tuition is apt to be very expensive.

* * *

According to *The World Tomorrow*, every family in the United States would have \$10,961 of capital and annual income of \$2,366, if the national wealth and income for 1930 could be divided equally between all the families of the country. The total national wealth of the United States in 1930 amounted to 329.7 billions of dollars and the national income for the same year was 71 billions of dollars. The per capita wealth in 1930 was \$2,677 as compared with \$2,977 in 1929, and the per capita income was \$579 in 1930 as compared with \$701 in 1929. If the capital and income of the nation were divided according to the above hypothesis it would be interesting to know what time would elapse before the present inequality in the distribution of wealth would be again attained.

* * *

Ogden L. Mills, Secretary of the United States Treasury, writing in the *Review of Reviews*, says, "I have the very distinct impression that whereas up to the last quarter of 1931 economic factors exercised the preponderating influence, from October until January, 1932, psychological influences have played the leading part. During those three months the psychology of fear was written in large letters on every step of the downward course. . . . If the psychology of fear can be dispelled, there is real ground for the belief that the foundation is now sufficiently firm to justify our vigorously addressing ourselves to the task of reconstruction."

MAN WANTS BUT LITTLE HERE BELOW

According to Maurice Sugar the demands made upon the Ford Motor Company by the deputation of unemployed who endeavored to visit the plant on March 7, were:

(1) Jobs for all laid-off Ford workers; (2) immediate payment of 50 per cent of full wages; (3) seven-hour day without reduction in pay; (4) slowing down of the deadly speed-up; (5) two fifteen-minute rest periods; (6) no discrimination against Negroes as to jobs, relief, medical service; (7) free medical aid in the Ford Hospital for the employed and unemployed Ford workers and their

families; (8) five tons of coke or coal for the winter; (9) abolition of service men (spies, police, et cetera); (10) no foreclosures on homes of former Ford workers—Ford to assume responsibility for all mortgages, land contracts, and back taxes on homes until six months after regular full-time reemployment; (11) immediate payment of lump sum of \$50 winter relief.

SPILLING INK

Ah, me, ma ink is spilled again,
Blots, on ma desk an' fingers ten,
Ma clumsy efforts in ma den
Are scarcely worth a try again,
But, Gray an' Burns an' Poe, ye ken,
Ga'ed tae th' world their song tae men,
By drops o' ink upon their pen.

A've read ma Osler, through an' through,
A've gan tae clinic's, Mayo's too,
A've worshiped Lister, paid ma due
Tae Syme an' Simpson, Keen, Agnew,
But still a'm me, not worth a boo,
Yet, when St. Peter's door's in view,
Ah'll tell him straight, ah don't owe you.
Guid Nicht

WEELUM.

NEITHER A THING OF BEAUTY NOR A JOY FOREVER

The poet of the Manchester Guardian produces the following on the announcement of horticultural research to the effect that striped tulips derive their splendor from a virus which is analogous to the known virus diseases of man. For instance it is said that a green fly dining off a tulip infects the tulip so that the flower, which is the victim of infection, bursts forth with greater beauty. The poem goes on to enlarge upon the effect of infection in man with the conclusion that the virus which produces the common cold leaves its victim much less an object of beauty.

How wonderful is Nature's plan!
But rather hard, it seems, on Man.

Consider tulips how they grow
In stately splendour row by row,
Equipped, when in a state of health,
With beauty in exceeding wealth;
While, what is more, if they fall ill
They then appear more beauteous still—
E'en as the unassuming oyster,
A resident in regions moister,
Emits, or so I've seen it stated,
The precious pearl when irritated.

For, lo! in tulips at their ease
A simple colour scheme one sees,
Each nodding to its upright fellow
In mauve, or red, or pink, or yellow.
But after that there drifts along
The eager aphid going strong—
A nasty little bug, I feel,
Who only calls to make a meal,
And, what is worse, is then desirous
Of paying for it with a virus.
Yet good results though bad begins,
And in the end the tulip wins,
For it is now by experts written
That when the bug has called (and bitten),
These tulips of the plainer types,
Break out in prized and gorgeous stripes.

Consider, then, the human case
Where, too, the virus has its place;
Consider one we know of old—
That virus of the common cold.
When that foul fiend its woe unleashes,
Does that improve the human species?
Do those by that affliction tried
Then grow in beauty side by side,
Acquiring, with each sneeze and snort,
A loveliness of rarer sort?
Do they become, with each catarrh,
More gay and beautiful by far?
Is that the common human lot?
To put it frankly it is not.
Perchance the nasal organ grows
A shade more like the red, red rose,
But that is not a sign of grace
Nor does it suit the human face.
The virus of the common cold
Leaves no one nicer to behold.

The face is plain, the case is flat—
So there we are, and that is that;
Tulips, like lilies of the field,
Succeed in realms where we must yield.
And I will trouble you no more
Beyond observing (as before)
How wonderful is Nature's plan—
But rather hard, it seems, on Man!

GENERAL NEWS AND ANNOUNCEMENTS

Dr. H. W. Plaggemeyer and Dr. Carl G. Weltman of Detroit addressed the April meeting of the Shiawassee County Medical Society, at Memorial Hospital in Owosso, April 14. There was a large attendance and the addresses on the subject of the Prostate Gland and its diseases were most interesting. Dr. Weltman exhibited a movie made of himself while operating for prostatic obstruction with the McCarthy resectoscope.

The Bulletin of the Wayne County Medical Society has published a list of medical papers with their authors and the Journals in which the articles have appeared for the six months ending March 1, 1932. The papers have appeared in a number of the national and special Journals. There were seventy-three published papers, of which the largest number to appear in any one publication, twenty-two per cent, appeared in the Journal of the Michigan State Medical Society.

Statistics issued by the Detroit Department of Health reveal a marked decrease in Detroit's tuberculosis death rate and an increase in the number of patients whose condition improved. The death rate of patients at the William H. Maybury Sanitarium declined from 25.8 per cent in 1927 to 10 per cent in 1931, according to the report, and the percentage of patients whose condition improved rose from 45.4 in 1927 to 68.9 in 1931. The death rate in every other common communicable disease also fell from normal during 1931.

Dr. H. W. Plaggemeyer, President of the Wayne County Medical Society and Dr. Louis J. Hirschman of Detroit provided the scientific program at a meeting of the Seventh Councillor District held on April 19th at Port Huron. Dr. Plaggemeyer spoke on Modern Surgery of the Prostate Gland and

showed moving pictures of the transurethral operation. Dr. Hirschman spoke on the Surgical Treatment of Internal Hemorrhoids. Dr. Carl F. Moll, President of the Michigan State Medical Society, was present and delivered a splendid after dinner address.

AMERICAN MEDICAL GOLFERS PLAY IN NEW ORLEANS, MAY 9

The American Medical Golfing Association will hold its Eighteenth Annual Tournament in New Orleans on Monday, May 9, 1932. The thirty-six hole match will be played over the beautiful and interesting New Orleans Country Club course, followed in the evening by the golfers' banquet and distribution of prizes. Approximately fifty trophies and prizes will be distributed to winners in the various events. Dr. Frank A. Kelly of Detroit is President of the American medical golfers, Dr. Homer K. Nicoll, of Chicago is First Vice-President, and Dr. John Welsh Croskey of Philadelphia is Second Vice-President. Invitations to attend the American Medical Golfing Association tournament in New Orleans are being sent to members from the Executive Office in Detroit. Any male Fellow of the American Medical Association in good standing is eligible to membership in the Golfing Association. Physicians are invited to become associated with this active social organization which offers much in good sportsmanship and friendship. Applications may be procured by writing Bill Burns, Executive Secretary, 4421 Woodward Avenue, Detroit, Michigan.

OBITUARY

DR. NEWELL E. LAVELY

Dr. Newell E. Lavelly died at his home the first week in April following an illness of three weeks. Dr. Lavelly was born in Bay City. He received his early education in Bay City schools and later attended the University of Michigan, graduating from the medical school in 1920. He came to Detroit two years later. He served his internship at Grace Hospital, Detroit. Besides his widow, Mildred, Dr. Lavelly is survived by two daughters, Mary and Ruth; his mother and father, Mr. and Mrs. Peter Lavelly, Detroit, and three brothers, Edwin of Flint, and Elton and Morgan, both of Detroit.

DR. J. G. STONE

Dr. J. G. Stone of Windsor, Ontario, died very suddenly April 4 after leaving his office. Dr. Stone was a non-resident associate member of the Wayne County Medical Society. He limited his practice to X-ray and was a member of the Detroit X-ray and Radium Society and its president in 1930.

DR. JOSEPH E. MAUNDERS

Dr. Joseph E. Maunders, who practised in Detroit, died at his home in Birmingham April 13 of apoplexy. Dr. Maunders was at one time a congregational minister. He leaves a wife and four children. Joseph, Virginia, James and Donald.

DR. E. T. MILLIGAN

Dr. E. T. Milligan, a former Detroit physician, died at his home at Santa Monica, California, on March 31, 1932. Dr. Milligan was a non-resident associate member of the Wayne County Medical Society. He was well known to the older members of the Wayne County and Michigan State Medical

Societies. Born in Dublin, Ireland, in 1855, he came to the United States when he was eighteen years of age. He graduated from the Michigan College of Medicine and Surgery in the class of 1892. Dr. Milligan is survived by his wife and three sons, Dr. F. J. Milligan of Santa Monica and Harry C. and Clarence P. Milligan, Detroit attorneys.

DR. LEWIS C. KNAPP

Dr. Lewis C. Knapp of Monroe, Michigan, died at Ann Arbor on April 5, 1932, at the age of sixty-four years. Dr. Knapp was born on a farm near Strasburg and spent his early life on the farm, receiving his education in the public schools of Monroe. He entered the University of Michigan in 1888 and graduated in medicine three years later. He was married in 1897 to Miss Alida Kemmerling, who survives him. Dr. Knapp took an active part in the affairs of his town. In addition to holding civic positions he was President of the Monroe State Savings Bank. He was also a director of the Consolidated Paper Company and at the time of his death he was a director of the First National Bank. During the forty years of his medical career Dr. Knapp built up a large practice. He was a member of the Monroe County and Michigan State Medical Societies.

DR. GEORGE H. SHERMAN

Dr. George H. Sherman of Detroit died at Palm Beach, Florida, April 19. He was born in Napoleon, Ohio, May 23, 1858. Graduating from Northwestern University, he came to Detroit and established a practice on St. Aubin Ave. Later he founded the Sherman Laboratory at 14600 E. Jefferson Ave. He was a member of the Wayne County Medical Society and the American Medical Association. For many years Dr. Sherman was engaged in the manufacture of vaccines. Surviving are his widow, Mrs. Emilie Sherman; three daughters, Mrs. Edgar O. Marty, Plattsville, Pa., Mrs. Alexander M. Rovin and Mrs. Clarence Wehly, both of Detroit; one son, Arthur G.; and a sister, Mrs. Nellie Saalfeld.

MEDICAL ECONOMICS

CAN WE AFFORD STATE MEDICINE?

J. G. R. MANWARING, M.D.
FLINT, MICHIGAN

Part III

THE COST OF GOVERNMENTAL MEDICAL SERVICE

It is becoming more and more evident that there is a strong movement on foot to make the practice of medicine a function of government. Articles are appearing in all sorts of places advocating the idea, attacking the cost of medical service and advocating that the government render this service.

Is government by bureaus so efficient we can afford to make this move? Would it be an economy?

Ex-president Coolidge said:

"No method of procedure has ever been devised by which liberty could be divorced from local self-government, no plan of centralization, has ever been adopted which did not result in bureaucracy, tyranny, inflexibility, reaction, and decline. Of all forms of government, those administered by bureaus are about the least satisfactory to an enlightened and progressive people. Being irresponsible they become autocratic, and being autocratic they resist development. Unless bureaucracy is constantly resisted it breaks down representative government and overwhelms democracy. It is

the one element in our institutions that sets up the pretense of having authority over everybody and being responsible to nobody."

Senator Hiram Bingham says:
"Senator Underwood once said: 'What a paternalistic Government proposes to do for the people, in the end the people pay for, with the greatly added price of burdens and commissions to those who engage in its administration!' But the cost and burden of government is not the main equation involved in personal government; it is restricted freedom; it is often dishonest and usually Pharaiseal interference with the individual in the home, the work-shop, or the business office; in his religion, his recreation, yes, verily, in life itself.

"Their tendency is to grow larger and more powerful rather than smaller and weaker. The bureaucrat is always sure that he can operate more effectually in the public interest if he is given more money and more power and more responsibility. Rarely, if ever, does a bureaucrat suggest that there is any danger in too much government. On the contrary, he sincerely believes that his powers are only going to be exercised benevolently.

"The bureaucrat naturally is going to make his job seem important and necessary as long as he possibly can."

It is true that commissions, bureaus and other agencies to which are delegated governmental functions tend to grow and hazard the future by their cost.

"In an address delivered in Kansas City on Aug. 31, 1931. Administrator Hines of the Veterans' Bureau is quoted as making the following statement: 'The government's annual outlay for benefits to former service men amounts to about \$900,000,000.' Think of that. In the same address he is quoted as making the following statement: 'The government is spending \$20,000,000 annually as compensation to 400,000 World War veterans and dependents for disabilities as a result of war service.' Think of that as veterans. Twenty of the \$900,000,000 appropriated by Congress is going directly as compensation to veterans with service connected disabilities and their dependents. To be exact, it represents one forty-fifth of the total amount expended. Contemplate for a moment those administration costs. I simply cannot believe those figures, but they are exact quotations from the associated press news items. But if the director is in error by 100 per cent, still think of what the proportion would be. Think of what an enormous proportion of the money appropriated by Congress for the benefit of veterans adheres to administrative red tape as it filters through, and the relatively small proportion that finally gets to the pockets of veterans."

Frank H. Peckham, Vice-President of the Sentinels of the Republic, comments as follows:

"What of some of the many extra-Federal activities that have been carried on thus far? Despite the fact that during the past twenty years numbers of Federal bureaus and agencies have been using millions of dollars ostensibly to aid the farmers, the farmers' economic condition has grown worse and worse. During the same period, various Federal agencies have been spending millions to aid and stimulate industry, yet we have had a nationwide industrial collapse. Also, for example, consider the activities of the Federal Children's Bureau under the now defunct and discredited Maternity Act. For seven years, that Bureau spent millions of dollars, ostensibly to save mothers and babies. Yet, during 1928, the last calendar year while that Act was in force, there was a very material increase in maternal and infant mortality rates over those of the preceding year. Another bureau, part of a great governmental machine supposedly devoted to important national affairs, has kept itself busy telling housewives of the country how to arrange their kitchen furniture, how to make clothing, and furnishing recipes for cooking, all of which information could readily be obtained from a multitude of publications everywhere available.

"Is it not time for us to get rid of various frills and furbelows in government and get back to a minimum of governmental activities? American mothers, with the aid of American physicians, can take care of themselves and their babies, without advice from a Federal bureau in Washington. Farmers are beginning to realize that a multitude of governmental activities in their behalf have proven delusions and snares. Industry is finding that governmental bureaus and commissions and committees are poor substitutes for economic laws. It is time that we ceased to look to some governmental agency at Washington for a solution of our troubles."

Isiah Bowman states that the Reclamation Service has put over twenty-four irrigation projects and has spent many millions of dollars in doing this in the past 28 years. The net result to date has been to settle on these projects 140,000 people instead of the expected million or so. He states these projects are all economically unsound and that is why the government is induced to develop them.

If the projects are sound, private capital is always forthcoming for them.

And now we have started the Boulder Dam, a

\$500,000,000 project which will bring in a large area of irrigated land not needed and is sure to be an economic failure. Such land is too expensive for grain crops and can only be used in this country for truck gardening and citrus fruits. We have an over-production now in these commodities so that a portion of the citrus crop is destroyed to keep up prices.

The Post Office Department is often cited as an example of efficiency of government in business. Yet it was only a few years ago that the papers carried the news that one of our big express companies offered to take it over, give the same service and cut the rates in half.

Where governments are subject to popular vote it really seems that economy in administration is impossible. It is a fallacy to compare for instance pre-war medical service in Germany with any democratic country. Under a stiff monarchy things can be done efficiently and economically.

The growth of departments in our government has been tremendous, so much so that in one way or another a large part of our adult population is on the government pay roll.

"As a result of the enormous increase in public employees and pensioners, all branches of government in this country are supporting either wholly or in part, more than ten million people. Think of it! One-seventh of the adult population of the country supported wholly or partially by taxation. And the number is increasing daily. Every month the Federal government sends pension cheques to one million, one hundred thousand persons—a number which increases every day. Others receiving part or all of their support from taxable resources of cities, states, and the nation are:

Federal employees of all classes.....	988,000 persons
Tax-supported insane institutions.....	286,000 persons
Prisoners, daily average.....	220,000 persons
Federal Hospitals population.....	27,700 persons
School teachers.....	1,124,000 persons
State, City and county payrolls.....	1,300,000 persons
Directly or indirectly on roads.....	2,487,000 persons
Directly or indirectly, working on public construction	900,000 persons

"The total number of persons in these groups is 8,431,000 and this figure does not include pensioners of cities, states, counties and towns, or persons receiving bonuses or other forms of financial aid from any division of the government. There has been an increase of some 6,000 Federal employees in the past year. No public charities are included in these figures. It is, of course, a duty of the government to be generous to its employees and deserving pensioners, but in considering our public expenditures we should not lose sight of natural economic loss and the dangers of over-taxation.

"The picture of a nation as young and promising as the United States, drifting in this direction, is one of a depressing nature. The total number of gainfully employed persons in the country is, at best, 46 millions, and the total adult population is more than 70 millions. Thus, if we subtract from the gainfully employed, those persons classified as gainfully employed in the business of government, we find that for every four gainfully employed in the country there is one person supported wholly or in part by the government. One for every four!"

Can any student of government honestly believe that government service can be really economical?

Can he believe that government medical service would be given at less cost to the people than it is now?

Can he believe that there will not be many more employed than at present to render an equivalent service?

Fat jobs, political appointments, voting machines of large numbers of employes, "buck-passing," paid retainers of influential political bosses, unwarranted local expenditures for political influence and all the related children of government folly would attach themselves to any system of state medicine, so that as a measure of economy it would fail.

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SOCIETY ACTIVITY

PROFESSIONAL FEES

Every now and then from one source or another there comes in a complaint as to the fee that was charged by a physician or surgeon. As a rule the reply is that this is a contractual matter between the patient and the doctor and must be adjusted by the two parties, unless arbitration is agreed upon.

Once every so often there is seen the most flagrant form of gouging. *California and Western Medicine* imparts the following illustration:

The Concrete Mid-West Case.—Let us go back to the itemized statement of the mid-west physician, a young doctor out of college only some five years or so, who is in general practice and is not an orthopedic or surgeon specialist, and who sent to an elderly woman with a fractured femur (having total means amounting to about ten thousand dollars), a statement for professional services amounting to \$4,900; and who, when requested to modify this bill, as above indicated, refuses to do so. The copy of the statement which we have been given, with deletions of identifying place, is as follows:

October 15, 1930.	
To the Estate of	
The	National Bank of
City), Executor.	
February 2, 1930.—Physical examination, diagnosis, application of splint, etc.....	\$ 250.00
February 3, 1930.—Operation, reduction of fracture, application of body cast, etc.....	1,500.00
February 3 to April 15, 1930.—145 hospital visits, including treatment of fracture and intravenous injection for chronic arthritis, and treatment of ulcers at \$10 per visit (Editor's Note. A period of 70 days).....	1,450.00
March 10, 1930.—Operation, removal of cast, re-application of bivalved cast, curettement of ulcers and treatment of ulcers.....	850.00
April 15 to May 4, 1930.—Forty home visits, including treatment of fracture, intravenous injections for arthritis, treatment of ulcers at \$15.....	600.00
May 4, 1930.—Night house visit, five hours' detention with patient, injection of stimulants, artificial respiration, etc., attempting to save patient from death, at \$50 per hour.....	250.00
Total for professional services rendered.....	\$4,900.00
Paid on account 2/9/30, \$85; 2/17/30, \$35; 2/25, \$35; 3/1, \$35; 3/8, \$35; 3/15, \$35; 3/22, \$35; 3/29, \$15.	
Total paid on account.....	\$ 310.00
Amount due.....	\$4,590.00

Readers of *California and Western Medicine* can come to their own conclusions as to the justice of charges such as the above; and can estimate for themselves the effect which publicity of such charges will have in that particular community, in forming lay opinions on the local medical profession's standards of fair dealing.

Recently opinion was asked by an administrator as to the following itemized statement for services rendered over a period of three weeks to an aged man who had sustained a fractured femur from the results of which he died.

Copy of Statement	
Sept. 7. X-rays (\$25.00) Splint (\$50.00) Setting (\$275.00) Calls to Hospital, consultation treatment of shock.....	\$ 450.00
Sept. 8. Dr. 3 calls @ \$3.00.....	9.00
Dr. Consultation.....	15.00
Sept. 9. Dr. 4 calls @ \$3.00.....	12.00
Sept. 9. 3 Glucose intravenous @ \$20.00.....	60.00
Sept. 10. Dr. 3 calls @ \$3.00.....	9.00
Sept. 10. Dr. consultation.....	15.00
Sept. 10. 2 Glucose @ \$20.00.....	40.00
Sept. 11. Dr. 3 calls @ \$3.00.....	9.00
Sept. 11. Auto Injection of Blood into Break.....	50.00
Sept. 12 Dr. 3 calls @ \$3.00.....	9.00
Sept. 12. 2 Glucose.....	40.00
Sept. 12. Drs. resetting new cast.....	250.00
Sept. 13. Dr. 3 calls \$3.00. 1 night call.....	10.00
Sept. 13. 1 Glucose.....	20.00
Sept. 14. Dr. 2 day calls, 1 night call @ \$4.00.....	10.00
Sept. 14. Dr. consultation.....	15.00
Sept. 14. 3 Glucose @ \$20.00.....	60.00
Sept. 15. Dr. 3 calls @ \$3.00.....	9.00
Sept. 15. 2 Glucose.....	40.00
Sept. 15. Dr. consultation.....	15.00
Sept. 16. Dr. 4 calls: 3 day, 1 night.....	13.00
Sept. 16. 3 Glucose.....	60.00
Sept. 16. Dr. consultation.....	15.00
Sept. 17. Dr. 4 calls, 1 night.....	13.00
Sept. 17. Dr. consultation.....	15.00
Sept. 17. 3 Glucose.....	60.00
Sept. 18. Dr. 4 day, 1 night calls.....	16.00
Sept. 18. 4 Glucose @ \$20.00.....	80.00
Sept. 18. Dr. consultation.....	15.00
Sept. 19. Dr. 2 day, 1 night call.....	10.00
Sept. 19. 2 Glucose.....	40.00
Sept. 19. Drs. & consultation.....	30.00
Sept. 20. Dr. 5 calls, 4 day, 1 night.....	16.00
Sept. 20. 4 Glucose.....	80.00
Sept. 20. Dr. consultation.....	15.00
Sept. 21. Dr. 6 calls, 5 day and 1 night.....	19.00
Sept. 21. Drs. & (con. and preparation to move home).....	25.00
Sept. 21. 5 Glucose.....	100.00
Sept. 22. Dr. 5 calls, 4 day, 1 night.....	16.00
Sept. 22. 4 Glucose.....	80.00
Sept. 23. Dr. 3 calls, 2 day, 1 night.....	13.00
Sept. 23. 3 Glucose.....	80.00
Sept. 23. Dr. consultation.....	15.00
Sept. 24. Dr. 3 calls, 2 day, 1 night.....	13.00
Sept. 24. 3 Glucose.....	60.00
Sept. 24. Dr. consultation.....	15.00
Sept. 25. Dr. 4 day, 1 night calls.....	16.00
Sept. 25. 4 Glucose.....	80.00
Sept. 26. Dr. consultation.....	15.00
Sept. 26. Dr. 5 calls, 4 day, 1 night.....	16.00
Sept. 26. 4 Glucose.....	80.00
Sept. 26. Dr. consultation.....	15.00
Sept. 27. Dr. 5 calls, 4 day, 1 night.....	16.00
Sept. 27. 4 Glucose.....	80.00
Sept. 27. Dr. consultation.....	15.00
Sept. 28. Dr. 5 calls, 4 day, 1 night.....	16.00
Sept. 28. 4 Glucose.....	80.00
Sept. 28. Dr. consultation.....	15.00
Sept. 29. Dr. 5 calls, 4 day, 1 night.....	16.00
Sept. 29. 4 Glucose.....	20.00
Sept. 29. Dr. consultation.....	15.00
Sept. 30. Dr. 4 calls, 3 day, 1 night.....	13.00
Sept. 30. 3 Glucose.....	60.00
Sept. 30. Dr. consultation.....	15.00
Oct. 1. Dr. 3 day, 1 night calls.....	13.00
Oct. 1. 3 Glucose.....	60.00
Oct. 1. Dr. consultation.....	15.00
Oct. 2. Dr. 3 calls, 2 day, 1 night.....	10.00
Oct. 2. 2 Glucose.....	40.00
Oct. 2. Dr. consultation.....	15.00
Oct. 3. Dr. 3 calls, 2 day, 1 night.....	10.00
Oct. 3. 2 Glucose.....	40.00
Oct. 3. Dr. consultation.....	15.00
Oct. 4. Dr. 3 calls, 2 day, 1 night.....	10.00
Oct. 4. 2 Glucose.....	40.00
Oct. 4. Dr. consultation.....	15.00
Oct. 5. Dr. 3 calls.....	9.00
Oct. 5. 2 Glucose.....	40.00
Sum Total.....	\$3,016.00
Paid	50.00
	\$2,966.00

It is instances such as these that cast reflections upon the entire profession. No one can uphold or defend the doctor rendering such statements. In law suits to collect one would have no alternative but to testify that the fee was exorbitant and some of the services not consistent with good practice.

SAVE YOUR PATIENT'S MONEY

Proprietary articles are sold at a price fixed so as to yield a handsome profit to the manufacturer. The buyer pays the profit. In prescribing drugs why put this cost burden on your patient? The patent rights of many of these drugs have expired. Reputable chemical manufacturers now make and sell to druggists the identical chemical at a price far below that charged for the trade name article. Compare this list as printed by the *Journal of the New Jersey Medical Society* and save your patient's money.

	Price: 1 oz.		Price: 1 oz.
Proprietary		Chemical	
Phenacetin	\$.63	Acetphenetidin	\$.20
Aspirin Bayer .....	.85	Acetylsalicylic acid .....	.15
Veronal	3.00	Barbital .....	.70
Atophan	2.75	Cinchophen .....	.35
Duotal	1.07	Guaiacol carbonate .....	.27
Urotropin .....	.60	Methenamine .....	.13
Tolysin	2.25	Neocinchophen .....	.97
Luminal (in ½ oz. carton)	6.90	Phenobarbital	1.75
Trional	1.90	Sulphonethylnme- thane .....	.50
Sulphonal	1.70	Sulphomethane .....	.40
		Theobromine so- dium salicylate .....	.30
Diuretin	1.85	Thymol iodid .....	.68
Aristol	1.80		
Total	\$25.30	Total	\$6.40

MALPRACTICE SUITS

To the Members of the Michigan State Medical Society—Greetings:

Your attention is called to the increasing number of malpractice suits being brought against members of this Society. They are of every type, not only the general practitioners but the specialists also.

We ask the coöperation of our members in being extremely careful how they talk about cases of other physicians which come into their hands. Loose talk—and even the expression, "Who was your doctor before in this case?"—has been the beginning of unjust suits for damages for alleged malpractice.

Fracture cases continue to be the principal cause of trouble and, secondly, burns of different character.

No fracture case should ever be treated without an X-ray before and after reduction and in between, and then at the time of the removal of the splints or casts. Many doctors state that the patients are unwilling to pay for the costs of X-rays, and in such in-

stances the doctors should obtain written statements, witnessed by two people if possible, that the patients do not want X-rays, although they have been recommended and insisted upon by the doctors. This is the only way to protect yourselves, for when you are brought into Court and are unable to produce X-rays, it will be easy to produce doctors to state that X-ray machines are in common and general use and that it is the usual and ordinary practice in nearly every locality to use an X-ray in the diagnosis and reduction of fractures.

The law requires a doctor to act as a usual and ordinary physician and surgeon would under similar circumstances in the locality in which he practices and like localities.

There have been several instances recently of members of the State Society giving testimony against fellow members. This should be done only when a member so testifying is thoroughly informed on his subject, and not until he is thoroughly convinced that the doctor has not only been guilty of mistake in both diagnosis and treatment but that if he had used the skill of the average doctor in his and like localities, such treatment would not have been given or omitted, and that because of such omission or commission, damage actually resulted. It should always be borne in mind that a doctor cannot follow mathematical and mechanical methods of decision, but must use his best judgment, and if he does that honestly and conscientiously and follows the practice of the average doctor in his community, he should not be held for damages. From some instances that have been reported to the Medico-Legal Committee recently, it would seem that some doctors were interested in securing a fee for testifying, without justification, against other members of the Society.

The Committee will be glad to receive suggestions from any member of the Society at any time in connection with Medico-Legal matters.

Very truly yours,

MEDICO-LEGAL COMMITTEE

By WILLIAM J. STAPLETON, JR., M.D.
Chairman

ANGUS McLEAN, M.D.
J. G. R. MANWARING, M.D.
J. D. BRUCE, M.D.
EARL I. CARR, M.D.

COUNCILOR'S REPORT

Port Huron, Mich.

April 8, 1932.

Secretary State Medical Society:

The following is a brief report of conditions in the Seventh Councilor District.

I have had personal interviews with the officers of Saint Clair, Sanilac, and Lapeer Counties. I have not been able to get in touch with the officers of Huron County, but have had some word from one of the oldest members of that society.

Saint Clair County continues to function well. Meetings are being held regularly and are well attended. We have the same trouble as in past years, in that a certain number of our members never attend our sessions, and feel that their obligations to our society are paid when a check for annual dues is remitted. This is detrimental to our best interests as it prevents any united action on vital matters when urgently needed.

We have had no deaths in the past year. At this time thirty out of forty-five members have paid their dues. We have had two new members and rejected the application of another, who had moved here recently from Wayne County.

I have attended several meetings in both Lapeer and Sanilac Counties. They are both doing excellent work. They are holding combined meetings at times and their members are devoted to their societies. They have had unusually good programs. As an example—on April 7 a combined meeting was held at Marlette with an attendance of forty-seven. Dr. Plinn Morse of Harper Hospital was the speaker. I can only wish that other county units would show the same spirit that is manifest in these two.

In both counties dues are well paid up. There is very little friction and much good fellowship.

Huron County is not reorganized. I cannot get in close touch with the members. There are few doctors in the county, and my recommendation is that they join with Sanilac as the Sanilac-Huron County unit.

We have succeeded in having four men in Lapeer County arrested for practicing without license. Their trials will come up shortly. In Sanilac, I am investigating a complaint that an osteopath is writing prescriptions and that a druggist is filling them. Under our present laws, it is difficult to get action in this case, but I believe that the State Board of Registration in Medicine

could urge the Pharmacy Board to act against the druggist for filling prescriptions written by an osteopath.

I feel well repaid for my work in rejuvenating the lagging counties in my district, and enjoy a feeling that the men in this district will continue their good work.

THEO. HEAVENRICII.

HEALTH EDUCATION

[An Activity Commended to County Societies]

Early in the spring of 1930 Jackson had a mild epidemic of smallpox. An order for generalized vaccination among school children and adults was immediately issued by the local health officer. Members of the County Medical Society were privileged to witness long lines of people, only too many of whom were their own good patients, presenting themselves to the health department for vaccination.

Soon after this incident the County Medical Society appointed a committee to study this situation and an analogous one dealing with diphtheria immunization which the health department had been carrying on since 1922. This proved to be the birth of what is now known as the Health Education Committee.

This committee, after a few meetings, realized very acutely that its problem was very much broader in scope and importance than was originally conceived. For instance: the action of our health department was merely the expression of a growing tendency for mass practice by agencies where the fee is very small, if any, and in no way commensurate with the services rendered, State Medicine if you will. It also realized that the work being done was very good and accrued to the marked benefit of the community, but it did not subscribe to the idea of public or private agencies doing it. On the other hand we felt quite certain that the medical profession as a group were falling down in the discharge of certain duties of a more public health nature. We felt that these conditions existed because we had not been alert enough to take advantage of the opportunities that were demanding attention.

As an outgrowth of this idea the committee thought the public was being deluged with a mass of information regarding their health that represented half truths or less,

from sources that were not in the least authoritative. The medical profession because of the supposed limitation of their code of ethics were sitting by and allowing this sort of thing to go on unchallenged.

With this general idea of our problem we sought and received the utmost coöperation from our health department and *succeeded in stopping public practice in the health department* and also the promise of discontinuance of the extensive diphtheria immunization campaign in the public schools. This latter was agreed to only after we had promised to be as successful in mass immunization as had the health department. When we demonstrated to them our willingness and sincerity they coöperated to the extent of putting their nurses out to contact those children who had not been immunized against diphtheria.

Another activity of the committee which in the past surely would have been relegated to the health department was a campaign to discover tuberculosis among high school and intermediate school children. This activity was very definitely sponsored by the Medical Society and with the sanction and hearty coöperation of the school and health authorities. This activity consisted of tuberculin testing as many pupils as possible and attempting to X-ray all positive reactors. This activity we feel has been well worth while and will be continued. It has very definite educational value as well as diagnostic excellence.

In addition to these things which in the past had been done by the health department we made a very definite attempt to reach the public with scientific authoritative facts presented by reputable individuals. This has been by means of the press, the pulpit, platform, radio, moving pictures and exhibits at the county fair. From all these sources we have disseminated facts which could be used by the public to their own advantage. Whenever possible the idea and advantage of periodic health examination was stressed.

We have set up a sub-committee on speakers to secure medical speakers for any organization that requests them. We really have gone farther and made contacts with various organizations requesting permission to furnish speakers for some of their meetings. We have been aided in this by a liaison committee from the Woman's Auxiliary of the County Medical Society. The enthu-

siasm and coöperation with which this phase of our activity has been received is very gratifying. The ministerial association, Parent-Teachers Association, luncheon clubs, women's clubs, child study clubs, etc., are very happy to and desirous of coöperating with us in furthering authoritative public health education.

In a measure at least we try to correlate our activity with that of reputable national organizations such as the National Tuberculosis Association, Child Health Association and many others. In this manner we are able to utilize the vast material and resources of the national associations with very little cost to ourselves except in time and effort and at the same time to use our organization to the definite benefit of the large groups. Truly, we are trying to make one hand wash the other for the benefit of the community at large.

To illustrate: at the present writing we are about to utilize the material furnished by the State Tuberculosis Association, combined with our annual tuberculin testing in the schools to make a definite drive to put before the public the desirability of early recognition of tuberculosis. We are placing speakers before Parent-Teacher groups, high school assemblies, church groups and luncheon clubs. We are having two fifteen minute periods over our local broadcasting station WIBM. We have placed talking trailers in four of our local theatres and we are following up with our tuberculin testing in the high and intermediate schools.

The committee with the sanction of the Medical Society has been given a fifteen minute period one day a week by our local radio station WIBM. Each week an unnamed member of the County Medical Society reads a prepared paper on a subject of public interest. We honor requests for special subjects to be broadcast and these papers are written by various members of the local society and edited by the committee.

Another thing that has been accomplished this year is the beginning of the casting off of our rigid and somewhat antiquated code of medical ethics. We feel quite happy that the Jackson County Medical Society sanctioned the printing of two cards which were to be included in the statements sent out from each office. These cards called attention to the desirability of: first, regular periodic health examination, and, second, the

absolute necessity of thorough-going immunization against diphtheria. By doing this the medical profession has discarded the rôle of passivity and assumed the better one of aggression. It is rightfully taking over the duty of guardian of the public health and is proud of it.

CARD 1

Have you had your annual Physical Examination?

Most incurable diseases pass through a curable stage.

Prevention is your best protection.

JACKSON COUNTY MEDICAL SOCIETY

CARD 2

DEPARTMENT OF HEALTH

JACKSON, MICHIGAN

Is Your Child Protected against Diphtheria?

Within recent years there have been over 200 cases of diphtheria per year in our city. Toxin-antitoxin has reduced this number to less than 10 per year for the past several years. Your Health Department is justly proud of this record.

If your children are unprotected, we earnestly advise you to

SEE YOUR DOCTOR!

Treatments are harmless. Over 20,000 have been given in Jackson in the last nine years without a single bad result.

The Health Department sponsored the introduction of diphtheria immunization, and has been active in giving the treatments through the schools and otherwise. This was done as a demonstration. We feel that our part of the program has been completed, and henceforth this work will be entirely in the hands of the private physicians, where it rightly belongs. SEE YOUR DOCTOR! He is prepared to do this work at a reasonable fee. If you are unable to pay, SEE YOUR DOCTOR anyway.

Lest there be some misunderstanding, the committee does not wish it inferred that all this has been attempted out of the bigness of its heart, for such would not be true. We realized the demand for knowledge on the part of the public and were not willing to see that demand filled by quasi-scientific material coming from questionable sources. Whether we did anything or not we realized that eventually the people who were our source of livelihood would live longer, happier lives and be more healthy because of this mass of information that was so freely accessible. It has been said that the practice of medicine consists of diagnosis and treatment. To this we would add two more parts, namely: keeping people well and making a living. Under the present status, if all people were well we would quite obviously have some difficulty making a living.

Under the future status we can compensate for the loss of one type of practice by the gain of another happier and more appreciated type: periodic physical examination of presumably healthy individuals.

The committee wishes to justify its existence and rationalize its procedure by stating that the public is demanding knowledge about health and we are anxious to supply that demand from a reputable and authoritative source, and thereby bring just credit to the medical profession.

R. H. ALTER, *Secretary*.

SURVEY OF MEDICAL SERVICE
AND HEALTH AGENCIES

STATEMENT OF PURPOSE

In accordance with the actions taken at the 1931 Annual Meeting of the Michigan State Medical Society and at a subsequent meeting of the Delegates the undersigned committee has accepted the task of studying the medical facilities of Michigan.

The committee enters upon its task with a full realization of its magnitude and with no preconceived opinions concerning the solution of medical problems in Michigan. It is hoped that everyone, public as well as profession, will understand that the sole objective of the committee is to gather valuable factual information upon which to base conclusions. No data will be collected for the sole purpose of criticizing any function or service now existent in medical care.

The committee's findings will be based entirely upon the facts presented. Through these facts it is hoped that the profession may be guided in the adoption of a definite policy concerning the social and economic aspects of medical care. Such a policy is vital to both the public and the profession.

To this end every individual either directly or indirectly associated in medical care in Michigan is asked to make a contribution. The most valuable contribution will not be one of money but of FACTS. Physicians, hospitals and other agencies will soon receive forms on which to present these facts. VOLUNTARY, EARLY, and COMPLETE CONTRIBUTIONS will determine, in great part, the value of these studies.

W. H. MARSHALL, *Chairman*

FRED A. BAKER

L. J. CHRISTIAN

BURT V. ESTABROOK

C. S. GORSLINE

F. C. WARNSHUIS, *Secretary Ex-officio*.

From the above it will be perceived that after several weeks of labor this special committee is now prepared to begin the compilation of informative facts. To secure facts upon which to base final conclusions assistance is required from every member and county society. A plea is now made that this aid be subscribed and that prompt replies be made to all inquiries that you receive.

This survey is a tremendous work. It embraces every factor related to health and medical service. Sound conclusions can not be formulated unless these facts are representative and frank, and come from every county. We bespeak this assistance.

The plan of study is inclusive. It will consume much time and many hours of labor. In the end, however, it is hoped that we will have a background that will impart actual existent conditions. Your patience is necessary, though the promise is made that the work will be completed as rapidly as possible. Your prompt replies will expedite the report.

That you may perceive the thoroughness and scope of study the following study plan is outlined:

STUDY PLAN

- I. Appointment of Committees on Public Relations by County Societies
- II. Appointment of special sub-committees by State Committee
 - A. University Hospital Committee
 - B. State Hospital Committees
 1. Tuberculosis
 2. Mental
 - C. Other
 1. Laboratory committee
 2. Public health committee
 3. Industrial committee
- III. Preparation and approval of "Purpose of Study" (Specimen 1)
- IV. Preparation and approval of preliminary survey schedule (Specimen 2)
- V. Preparation and approval of detailed individual schedules
 - A. Physicians (Specimen 3)
 - B. Hospitals (exclusive of mental and tuberculosis) (Specimen 4)
 - C. Laboratories (exclusive of hospital laboratories) (Specimen 5)
- VI. Preparation and approval of plans for special studies
 - A. Economic structure of population
 - B. Health Agencies (Specimen 6)
 1. Official
 2. Non-official
 - a. Michigan Children's Fund
 - b. Kellogg Fund
 - c. Tuberculosis
 - d. Other
 - C. Industrial Service (Specimen 7a)
 1. Lodges, etc. (Specimen 7b)
 - D. Welfare Service
 - E. Tuberculosis (Specimen 8)
 - F. Mental Diseases (Specimen 9)
 - G. Miscellaneous
 1. Workmen's Compensation
 2. Contract Practice
 3. Experiments in provisions of service
 4. Medical Society activities
 - a. Scientific
 - b. Public Relations
 5. Study of patients discharged from hospitals
 - a. Financial and social data

VII. Collection of Data

- A. Preliminary survey (Specimen 2) to be completed by local county society committees
- B. Detailed individual schedules
 1. Physicians' schedules (Specimen 3)
 - a. Mailing of preliminary letter (Specimen 10) signed by local committee in each county to all physicians in private practice. (Enclose Specimen 1)
 - b. Mailing of survey schedule, letter (Specimen 11) and return postal card (Specimen 12)
 - c. Follow-up by local committee
 1. Telephone or personal contact
 2. Hospital schedules (Specimen 4 or abbreviated schedule)
 - a. Mailing of schedules to local committees
 3. Laboratory schedules (Specimen 5)
 - a. Mailing of preliminary letter (Specimen 13) signed by local committee
 - b. Mailing of schedule and return postal card (Specimen 14)
 - c. Follow-up by local committee
 1. Telephone or personal
- C. Special Studies
 1. Economic structure of population
 - a. Distribution by counties
 1. Urban
 2. Rural
 - b. Economic data
 1. Distribution of wealth
 2. Incomes
 3. Costs of living
 4. Other county data
 2. Health agencies
 - a. Data from study for Governor's commission (Specimen 6)
 3. Industrial Service
 - a. Detailed schedule distributed through Manufacturers' Assn.
 - b. Schedule to other organizations such as fraternal, etc. (Specimen to be prepared)
 4. Welfare service
 - a. Data from study for Governor's commission
 1. Afflicted adults
 2. Afflicted children
 3. Crippled children
 4. Mothers' pensions
 5. Tuberculosis
 - a. Hospital service
 1. Detailed schedule (Specimen 8 to be prepared) to hospitals
 - b. Clinical service
 1. Data from public health survey
 - c. Field service
 1. Data from public health survey
 6. Mental diseases
 - a. Hospital service
 1. Detailed schedules (Specimen 9 to be prepared) to public and private hospitals
 - b. Clinical service
 1. Special local studies
 7. Miscellaneous
 - a. Workmen's Compensation
 1. Analysis of laws
 2. Relation of physician to carriers
 3. Defects and merits
 - b. Contract practice
 1. Data from physicians' schedules
 2. Data from industrial study
 - c. Experiments
 1. Medical society care of indigents
 2. Group practice
 3. Diagnostic clinics
 4. Immunization by private practitioners
 5. Collection and loan services
 6. Other
 - d. Medical society activities
 1. Data from local committees concerning scientific programs and public relations activities
 - e. Patients discharged from hospitals
 1. Costs
 2. How costs were met

VIII. Analyses and Correlation of Data, by Counties in Michigan

- A. Physicians
 1. Distribution
 - a. Urban
 1. Ratio to population
 2. Per capita wealth
 - b. Rural
 1. Ratio to population
 - a. Population per square mile

2. According to land valuation
 - a. Per cent of land in farms
3. Per capita wealth
2. Ages and years in practice
 - a. Urban
 - b. Rural
1. Correlate with above rural data
3. Professional training
 - a. Urban
 - b. Rural
4. Post-graduate training
 - a. Urban
 - b. Rural
5. Specialization
 - a. Urban
 1. Types
 2. Degree
 3. Preparation
 - b. Rural
 1. As above
6. Types of cases excluded from practice by general practitioner and partial specialist
 - a. Urban and rural
7. Equipment (to be determined by committees)
 - a. Urban and rural
8. The physician's "normal" week
 - a. Office practice
 1. Night office hours
 - b. Home calls
 1. Night calls
 - c. Hospital calls
9. Number of patients
 - a. Urban and rural
10. Dispensing of drugs
 - a. Urban and rural
11. Practice of preventive medicine
 - a. Urban and rural
12. Fees
 - a. Urban and rural
13. Financial adjustments for patients
 - a. Method
 - b. Fee and part-pay service
14. Hospital affiliations
 - a. Urban and rural
15. Gross cash incomes
 - a. Years 1928-1929-1930-1931
 - b. Urban incomes
 1. General practitioners
 - a. Years in practice
 2. Specialists (partial and complete)
 - a. Years in practice
 - b. Type of specialty
 - c. Rural incomes
 1. General practitioners
 - a. Years in practice
 - b. Type of community
 1. Correlate with county data
 2. Specialists
 - a. Years in practice
 - b. Preparation
 - c. Type of community
 1. Correlate with county data
 - d. Income from salary
 1. Public health
 2. Industry
 3. Fraternal
 4. Hospital
 5. Insurance
 6. Teaching
 7. Research
 - e. Income from contract
16. Expense
 - a. Items
 1. Urban and rural
17. Net incomes (1928-29-30-31)
 - a. Urban and rural
 - b. Same correlations as "Gross Income"
18. Total book accounts
 - a. 1928-29-30-31
19. Normal percentage of collection
- B. Hospitals (Urban and Rural, Other than State Hospitals)

Note: Data from state hospitals will be analyzed and correlated with special studies, such as tuberculosis and mental diseases.

 1. Distribution and ownership
 - a. Accredited
 2. Growth of facilities
 - a. Ten-year period
 - b. Correlate with population data
 3. Type
 - a. General
 - b. Special
 4. Bed capacities
 - a. By type
5. Occupancy
 - a. By class of patient
 1. Economic
 2. Illness
6. Services
7. Staff
 - a. Type
 - b. Personnel
 - c. Duties
8. Record keeping
 - a. Cases, autopsies
9. Nurses' training
10. Financial
 - a. Gross income (1928-29-30-31)
 1. Sources
 - b. Expenses
 1. Items
 - c. Net income (1928-29-30-31)
 1. Method of balancing deficit
- C. Laboratories (Urban and Rural, other than hospital and health dept.)
 1. Distribution
 2. Ownership
 - a. Personnel
 1. Training
 3. Type
 - a. Services provided
 4. Gross income (1928-29-30-31)
 - a. By services
 5. Expense
 - a. Items
 6. Net income (1928-29-30-31)
- D. Analyses and correlation of data from special studies
- IX. Interpretations and Conclusions
 - A. Submit data to sub-committees
 1. Recommendations of sub-committees
- X. Preparation of final reports

To supervise special details in each county the request has gone forth that each County Society appoint a committee on Public Relations. This committee will be called upon to supply certain local information and to expedite local reports.

It is stressed anew—subscribe prompt cooperation in order that this survey will serve and safeguard your personal interests.

MINUTES OF THE MEETING OF THE COMMITTEE ON SURVEY OF MEDICAL SERVICE AND HEALTH AGENCIES IN MICHIGAN

This special committee held its regular meeting in Lansing, on Sunday, April 17, 1932, with Chairman Marshall presiding and the following members present:

B. U. Estabrook
F. A. Baker
C. S. Gorsline
C. F. Moll
B. R. Corbus
F. C. Warnshuis

1. The committee voted unanimously to engage the services of Dr. N. Sinai as director of the study.

2. Dr. Sinai was present and presented a draft outlining the plan of study and presenting inclusive features of the study. This was gone over thoroughly and discussed in detail by the committee, and upon motion of Gorsline-Estabrook was approved.

3. Upon motion of Estabrook-Gorsline, Dr. Sinai and the Secretary were instructed to proceed with the institution of the preliminary details of the survey as outlined on the schedule that was adopted.

4. Upon motion of Baker-Gorsline, the expense accounts thus far incurred were approved and ordered paid.

5. Chairman Marshall nominated the following sub-committees:

(A) University Hospital

H. W. Plaggemeyer, Detroit
J. G. R. Manwaring, Flint
J. B. Jackson, Kalamazoo

(B) Tuberculosis

1. H. D. Chadwick, Detroit
W. H. Winchester, Flint
2. O. R. Yoder, Kalamazoo
F. P. Currier, Grand Rapids

Upon motion duly made these nominations were approved and the committees so constituted.

6. Upon motion duly made the committees—

- (C) 1. Laboratories
2. Public Health
3. Industrial

are to be appointed from nominations made by committee members, who will submit names within the next week.

The committee adjourned at 6:00 p. m.

F. C. WARNSHUIS,
Secretary-Ex-officio.

POST-GRADUATE OPPORTUNITIES SUMMER COURSES

The Michigan State Medical Society and the Department of Post-Graduate Medicine of the University of Michigan announce following courses for graduates to be held in Detroit:

PRACTITIONERS' COURSE IN MEDICINE, SURGERY, OBSTETRICS AND PEDIATRICS. June 6 to 18, inclusive, 8:00 a. m. to 4:00 p. m.

PROCTOLOGY, June 6 to 18, inclusive, 8:00 a. m. to 12:00 m. Receiving Hospital, Detroit. Doctors L. J. Hirschman, E. G. Martin, and Associates.

GYNECOLOGICAL PATHOLOGY. June 6 to 18, inclusive, 8:00 a. m. to 12:00 m. Pathological Laboratories, Detroit College of Medicine and Surgery, Detroit. Practitioners taking this or the preceding course may arrange to spend the afternoons in the Library, Pathological Laboratories, or in the General Practitioners' Course.

Enrollment in all courses is limited. For further information, address the Department of Post-Graduate Medicine, University Hospital, Ann Arbor, Michigan.

POST-GRADUATE CONFERENCE

The Michigan State Medical Society and the Department of Post-Graduate Medicine, University of Michigan, held a Post-Graduate Conference of the 7th Councilor District at the Harrington Hotel, Port Huron, Tuesday, April 19, 1932, T. F. Heavenrich, M.D., Councilor, presiding.

The afternoon program included the following: "Psychiatry as Related to the Physician," P. V. Wagley, M.D., Pontiac. "Golfers Itch and Athletes Foot." Lantern slides—Cyrus K. Valade, M.D., Detroit. "Fractures." Lantern slides—A. D. La Ferte, M.D., Detroit.

Dinner was served at the Harrington Hotel at 6:15 P. M., after which the following papers were presented: "Society Activity"—Carl F. Moll, M.D., State President, Flint. "Palliative and Surgical Treatment of Internal Hemorrhoids." Lantern slides—L. J. Hirschman, M.D., Detroit. "What the General Practitioner Should Know About the Prostate"—Harry W. Plaggemeyer, M.D., Detroit. "Trans-urethral Prostatectomy." Moving pictures—Carl Weltman, M.D., Detroit.

COUNTY SOCIETIES

BERRIEN COUNTY

At the December meeting of the Berrien County Medical Society held in Niles at the Four Flags Hotel the following new officers were elected for 1932: President, Carl A. Mitchell, Benton Harbor; vice president, John Ames, Niles; secretary-treasurer, W. C. Ellet, Benton Harbor; delegate to the State Society, E. J. Witt, St. Joseph.

The first meeting for 1932 was held at the Hotel Vincent in Benton Harbor when the new officers were inducted into office. The Secretary's annual report was read and accepted, and the report of the delegate to the special meeting of the House of Delegates in Jackson was also read and placed on file.

The report of the Committee on the care of the Indigent Adult Afflicted was read and placed on file and the Committee instructed to meet with the Board of Supervisors at their April meeting to arrange for the care of these cases for 1932.

A resolution of sympathy to the family of the late Doctor Fred Rice Belknap, a former member of this Society, was passed.

A questionnaire sent out by the Secretary to the members of the Society was partially summarized, and the Executive Committee were instructed to act on the suggestions which these answers gave on the conduct of the Society for the coming year.

W. C. ELLET, *Secretary.*

BAY COUNTY

A regular meeting was held Wednesday, February 24, at the Wenonah Hotel, at which time the program was given over to sound pictures of abdominal surgery.

Wednesday, March 9, Dr. T. Leucutia, of Harper Hospital, addressed the society on the question of "Radiological Consideration of Malignancies."

At the meeting of February 24, the Society instructed the secretary to protest to the two U. S. Senators and our district Congressman against the revival of the Sheppard-Towner bill. The telegram and subsequent replies from Senators Couzens and Vandenberg and Congressman Roy O. Woodruff are here presented for the interest of the Journal's readers.

L. FERNALD FOSTER, *Secretary.*

Telegram to

Hon. James Couzens
Hon. Arthur Vandenberg
Hon. Roy O. Woodruff

"We urge disapproval of the H. R. 7525 and S. 572. Letter follows."

The letter which followed the telegram was a copy of the statement prepared by the Wayne County Medical Society.

The copies attached are from the correspondence in reply to the telegram and letters.

CONGRESS OF THE UNITED STATES
HOUSE OF REPRESENTATIVES
WASHINGTON, D. C.

February 26, 1932.

Dr. L. Fernald Foster,
Bay City, Mich.

Dear Dr. Foster:

I am in receipt of your telegram of the 25th, relative to the action taken by the Bay County Medical Society with regard to H. R. 7525 and Senate 572, and will be glad to bear in mind your opposition thereto if this legislation comes before the House for action.

With kindest regards, I am

Sincerely yours,

ROY O. WOODRUFF.

CONGRESS OF THE UNITED STATES
WASHINGTON, D. C.

February 29, 1932.

Dr. L. Fernald Foster, Sec'y,
Bay County Medical Society,
Bay City, Mich.

Dear Dr. Foster:

I am just in receipt of your letter of the 25th, setting forth reasons why the Bay County Medical Society opposes the enactment of H. R. 7525, and will place it on file for reference in case this legislation comes before the House for action this session.

With all good wishes, I am

Sincerely yours,
ROY O. WOODRUFF.

UNITED STATES SENATE

February 29, 1932.

Dr. L. Fernald Foster, Secretary
Bay County Medical Society,
Bay City, Mich.

My dear Dr. Foster:

This will acknowledge your telegram respecting S-572. I beg to advise you that while I have heretofore favored this proposition in a general way, yet I feel that this year is no time to renew any federal bounties of any nature if we are to overtake the federal deficit and balance the federal budget and save the public credit. Therefore, unless some unexpected reason develops, I shall share your view in opposition to S-572 at the present time.

With warm personal regards and best wishes,

Cordially and faithfully,

A. H. VANDENBERG.

UNITED STATES SENATE

February 25, 1932.

Dr. L. Fernald Foster, Secretary,
Bay County Medical Society,
Bay City, Mich.

Dear Sir:

I have your telegram:

"We urge disapproval of H. R. 7525 and S. 572. Letter follows."

This bill is before the Committee on Commerce; just why I do not know, but in any event it is not yet before the Senate. I do not know in what form the bill will come before the Senate, or what the report from the committee will say. I am, however, of the impression that like legislation has heretofore been enacted by Congress, and that it has been responsible for effective work among the states.

Very truly yours,

JAMES COUZENS.

UNITED STATES SENATE

February 29, 1932.

Dr. L. Fernald Foster,
Bay County Medical Society,
Bay City, Mich.

Dear Sir:

I have your letter of the 25th, confirming your telegram of that date concerning S. 572.

This bill may not come to the floor of the Senate. If it does, the views expressed in your letter and telegram will be kept in mind, although generally speaking, I am in favor of the Federal Government assisting the states in such matters, wherever it can be safely done.

Very truly yours,

JAMES COUZENS.

CALHOUN COUNTY

The March meeting of the Calhoun County Medical Society was held at the Athelstan Club on Tuesday evening, March 1, 1932.

Meeting called to order by President Theodore Kolvord.

Minutes of the February meeting were approved as printed in The Bulletin.

Three communications were read. One from the Kalamazoo Academy of Medicine, stating that the state meeting would be held in Kalamazoo in September, and therefore the only possible date for the combined meeting of the Calhoun and the Kalamazoo Medical Societies would be in July or August, was discussed. It was decided that we should have no meeting at all during the months of July and August, and therefore we could not have a joint meeting of the two societies this year. The Kalamazoo Academy stated that they would accept us as their special guests at the state meeting.

Next a communication concerning the tuberculosis situation in Michigan was read. Due to the fact that the waiting lists for admission to the sanitariums are lengthy and sometimes filled with pa-

tients who have an erroneous diagnosis, and due to the fact that many positive cases are treated by artificial pneumothorax which require medical care, there is a great need for physicians who can make correct diagnosis and continue the refilling treatments for the pneumothorax. For this purpose courses of intensive instruction in the diagnosis and medical and surgical treatment of tuberculosis will be given at intervals throughout the year at the University Hospital, Ann Arbor, the Herman Kiefer Hospital, Detroit, and at the Howell Sanitarium. The first course will be given at University Hospital, Ann Arbor, April 11-15. Any who are interested may communicate with the Department of Post-Graduate Medicine, University Hospital, Ann Arbor.

The third communication had to do with the procedure in case of a threat or declaration of suit for alleged malpractice. For information concerning this communication, please confer with the county medical secretary.

The following bills were authorized to be paid:

Phoenix Printing Co.....	\$37.15
Dr. Plinn Morse.....	24.00
Mailing charges.....	1.75

The final action on the application of Dr. Arthur A. Humphrey was taken. Dr. Wilfred Haughey moved that the rules be suspended and the secretary be instructed to cast a unanimous vote for Dr. Arthur A. Humphrey for membership in the society. Passed. The secretary was so instructed.

It was announced by the treasurer that the time limit for paying the \$12.50 dues had arrived, and that he hoped the limit would be extended, but he could not promise it.

Dr. Rosenfeld attempted to get the general opinion of the society on the desirability of establishing through the Business Men's Credit Bureau some credit organization. This will be discussed more fully in The Bulletin.

The meeting was turned over to the program committee, and Dr. A. A. Hoyt gave a talk on "Diphtheria Immunization," and this was followed by a talk by Dr. Louis J. Hirschman, of Detroit, on "Colonic Dysfunction vs. Colitis."

No further business coming before the meeting, a motion to adjourn was carried.

GENESEE COUNTY

The regular meeting of the Genesee County Medical Society was held in Hurley Hospital Auditorium on March 16, with Dr. J. C. MacGregor, president-elect, presiding. Dr. Raphael Isaacs of Ann Arbor was the speaker of the day, his subject being, "The Anemias." This was discussed in detail by many members of the Society.

Genesee County meetings are held twice a month and are preceded by a luncheon in the Hospital dining room. The Society is proud of the large attendance at these meetings, which is partially due to the convenience of the meeting place, and partially to the excellent programs and speakers arranged for by the committees.

The second meeting in March was held on the 30th. The speaker at this meeting was Professor G. M. Trout of the Michigan State College at Lansing. The subject was, "Newer Discoveries Regarding Milk as an Article of Diet."

Dr. R. S. Halligan, president of the Society, has just returned from Rochester, and is at present recovering from a serious illness. The Society have missed him and are looking forward to seeing him preside at the meetings in the near future.

Dr. W. H. Marshall was honored at a birthday

dinner on Wednesday, March 23, in recognition of the great service he has rendered as a teacher of Medicine. More than one hundred of his associates, also many friends and members of the Hospital Board, paid high tribute to Dr. Marshall on this occasion. He has not only given a great deal of his own time to the teaching service at Hurley Hospital, but has organized practically all of the clinics and lectures given at this institution, in all branches of medicine, for the benefit of the internes and younger members on the Hospital staff. Dr. J. B. Elliot, Professor of Medical History at the University of Toronto, a former classmate of Dr. Marshall, was the speaker of the evening, his subject being, "Great Teachers of Internal Medicine." Others who spoke in appreciation of Dr. Marshall's outstanding work were, Dr. Carl F. Moll and Dr. Leon M. Bogart of Flint, Dr. James Davis of Detroit, and Dr. A. C. MacKinnon of Atlanta. Many letters and telegrams of congratulation were received from physicians in Michigan and Ontario, who were unable to attend. "There is no satisfaction greater or more enduring than the respect of one's associates," was the reply to the many tributes paid him. "What success I have had has been possible only because of your splendid coöperation. I have profited as much as you by my pleasant activities at the Hospital."

C. W. COLWELL, *Secretary*.

GRATIOT-ISABELLA-CLARE COUNTY

The February meeting of the Gratiot-Isabella-Clare County Medical Society was held in the Wright Hotel, Alma, Thursday, February 18. Nine members and two visitors had dinner together. Three members came in after dinner.

At 7:30 P. M. President Burt called the meeting to order. Minutes of the January meeting were read and approved. Some communications were read.

President Burt then called on Dr. W. E. Kaufman, Professor of Chemistry in Alma College, who spoke on "The Relation of Colloid Chemistry to Insanity." The doctor said his paper was based on Wilder D. Bancroft's published work on this subject. Doctor Kaufman's paper was well received and produced much favorable comment.

On behalf of the Society, President Burt thanked Doctor Kaufman for his kindness in presenting this subject to the Society.

Meeting adjourned.

The March meeting of the Gratiot-Isabella-Clare County Medical Society was held in the Wright Hotel, Alma, Thursday, March 24. Sixteen members and five visitors had dinner together. One member came in after dinner.

At 7:30 P. M. President Burt called the meeting to order. The Minutes of the previous meeting were read and approved. President Burt then introduced the speaker of the evening, Dr. Thomas D. Gordon from the Grand Rapids Clinic, whose subject was "Health Habits in Children." Some of the points the doctor stressed were as follows: Pregnant mothers should have plenty of milk, cod-liver oil and green leafy vegetables; begin to teach baby when two months old to sit on vessel to urinate and defecate; bed wetting will usually be prevented in this way. If such a case does come, the correction should be moral or psychological rather than by punishment. Give rewards, and praise judiciously. Stop thumb sucking at the first sign of it by various ways, such as putting stockings on the hands or something stiff around the elbows.

The doctor's talk was enjoyed by every one present. Many took advantage of the opportunity to ask Doctor Gordon questions. Doctor Burt called on

Doctors Kempton and O'Riley and Professor Hamilton to discuss Doctor Gordon's paper.

On behalf of the Society, President Burt invited the visitors to come again and thanked Doctor Gordon for his instructive talk.

Meeting adjourned.

E. M. HIGHFIELD, *Secretary*.

MUSKEGON COUNTY

The Muskegon County Medical Society reports sixty members paid for Muskegon County and State Medical Societies for 1932.

In January a meeting was held for general discussion of the new plan for caring for the County Indigents.

In February, Dr. Frank Garber, Sr., gave an interesting paper on "Hemorrhage from the Bowel."

The March meeting was held at the Occidental Hotel, Muskegon, March 25. Drs. Shattuck W. Hartwell and Wm. Le Fevre presented papers on "Diabetes in Surgery."

M. E. STONE, *Secretary*.

SAINT CLAIR COUNTY

A regular meeting of Saint Clair County Medical Society was held at the Edgewater Inn, Port Huron, Michigan, Tuesday, March 15, 1932. Supper was served to eighteen members and four guests at 6:15 p. m. The meeting was called to order by President Patterson at 7:45 p. m. with twenty-four members and four guests present. The minutes of the preceding meeting were read. A letter inviting the members of the Society to attend a noonday luncheon of the Lions Club of Port Huron on March 16, 1932, was read and five members signified their intention to attend. A letter was read from J. R. Ware, M.D., chairman of the local committee of the movement in connection with the observance of National Negro Health Week.

L. J. Hirschman, M.D., of Detroit, addressed the Society on, "What the general practitioner should know about diseases of the rectum and the proper treatment of same." The address was very practical and pointed out proper methods of examination in order to reach an accurate diagnosis as well as proper treatment for the more common ailments of the lower end of the intestinal tract. C. F. Thomas, M.D., and A. J. MacKenzie, M.D., discussed the subject.

C. G. Jennings, M.D., of Detroit, followed with an address on "The hypertensive patient." The address classified arteriosclerosis into three general subdivisions as follows: (a) the hyperplastic type characterized by great thickening of the media, narrowing of the lumen of the vessels, arterial tension above 150 mm. systolic and 90 mm. diastolic pressure and with usually more or less renal damage and dysfunction; (b) the atheromatous type characterized by a usual arterial hypotension and symptoms due to atheroma of aorta, coronaries and cerebral vessels; and (c) a senile type seen only in advanced age and characterized by deposition of lime salts along the vessels of the extremities and a usual normal or lowered systolic blood pressure. A series of lantern slides was shown to illustrate points in pathology and symptomatology which the speaker wished to emphasize, and several case histories were read. The paper was well presented and enjoyed by all present.

A regular meeting of a Saint Clair County Medical Society was held at Edgewater Inn, Port Huron, Mich., Tuesday, April 5, 1932. Supper was served to three guests and ten members, at the conclusion of which Dr. R. L. Dixon, Medical Superintendent of Michigan Home and Training School, Lapeer,

Michigan, addressed the meeting upon the subject, "The Pre-epileptic Child."

Dr. Dixon read a very interesting paper upon the subject, which was very much enjoyed by those present. The speaker stressed the need of bringing this subject to the attention of teachers, playground attendants, nursemaids and others who live in an intimate contact with children. He stated that it was just as important to recognize a definite pre-epileptic or pre-convulsive stage of epilepsy as to recognize early stages of carcinoma, tuberculosis or other general diseases. "If," said Dr. Dixon, "recognition is made in this stage of epilepsy, treatment is much more effective." The speaker also expressed the conviction that the recognition of a definite "personality make-up" was of more importance than the convulsion because all who suffer with the disease may not have the latter symptom. The discussion was opened by Dr. Douglas Treadgold, who approached the subject from the angle of the pediatricist, making a very interesting viewpoint and stressing the ketogenic diet in the control of the disease. Several others present made inquiries which Dr. Dixon covered in his closing remarks. A rising vote of thanks was tendered the speaker before adjournment.

GEORGE M. KESL, *Secretary-Treasurer.*

WAYNE COUNTY

CODE OF ETHICS FOR COMPENSATION CASES*

The Industrial Relations Committee, in establishing the following code, realizes the futility of outlining in detail any definite set of rules to govern compensation cases.

All that can be hoped for is the drawing up of a general working agreement which will provide for a better understanding between physicians having common interests in handling compensation cases.

The Committee deplores the fact that misunderstandings occur at times and it objects to intrusion by insurance companies which causes doctors to "bid" for industrial work and thus "pit" one physician against his neighbor.

We suggest that the following rules be subscribed to by all physicians handling compensation cases in Wayne County:

1. The industrial surgeon shall consider his relations with the factory he serves in the same manner as a physician called to attend a family in general practice.
2. He shall in no way solicit business from or advertise himself to any industrial plant unless he positively knows that the plant in question is not being cared for by any other surgeon.
3. He shall refuse appointment as surgeon by any industrial plant or insurance company concerned in the transaction until he is sure that the factory has no regular surgeon, that the surgeon has resigned, or has been officially discharged.
4. If necessary, he shall acquaint himself of the actual facts of the case by first calling upon the surgeon himself for a statement before entering into any negotiations whatever to take over new work.
5. He shall refuse to go in attendance to any factory regularly under the supervision of another doctor, except in emergency.
6. He shall never on his own initiative discuss rates or fees to any factory or insurance company, either in person or by letter, if this factory is being regularly cared for by another doctor.
7. Any compensation case following injury which is being treated by a physician other than the regular company's surgeon shall not be interfered with providing the doctor shows reasonable skill and diligence in attending the case.

It is provided, however, that the surgeon regularly employed by the company shall be privileged at proper times and under proper conditions to consult with the attending physician to determine the progress of the

*This Code has been approved by The Council of the Wayne County Medical Society, Detroit. It is published so that physicians doing compensation work may preserve this page for reference purposes.

case if the employer or insurance company involved so request.

Both physicians concerned shall preserve a friendly relationship and make the welfare of the patient of paramount interest.

8. Any infringement of these rules shall be construed as an unfriendly act and shall be referred to the Ethics Committee of the Wayne County Medical Society for decision.
9. The Industrial Surgeon should in every way possible raise the standing of this branch of the profession by—
 - (a) Personally supervising as much as possible the care of patients at office and factory.
 - (b) Preserving a standard of fees paid by insurance companies sufficiently high to insure skillful and painstaking service.
 - (c) Fostering a relationship of mutual respect and trust, not only between the Industrial Surgeon and his employers but an ethical relationship with other physicians.

Industrial Relations Committee,
Wayne County Medical Society.

WOMAN'S AUXILIARY, MICHIGAN STATE MEDICAL SOCIETY

MRS. J. EARL McINTYRE, *President, Lansing*
MRS. W. E. McNAMARA, *Secretary, Lansing*

It is with great pleasure and anticipation that the program for the Tenth Annual Convention to the American Medical Association is printed here for your perusal.

We who stay at home are depending on our delegates for messages of wisdom and help on their return. We are sure their stay will be delightful in the beautiful southern city of New Orleans, and they will have much to impart to us on their return.

WOMAN'S AUXILIARY TO THE AMERICAN MEDICAL ASSOCIATION

Tenth Annual Meeting, New Orleans, May 9-13, 1932
Headquarters: Jerusalem Temple, 1137 St. Charles Avenue

PRELIMINARY PROGRAM

Monday, May 9, 1932

6:00 P. M. National Board Dinner and Pre-Convention Meeting (for Board Members, only), Orleans Club, 5005 St. Charles Ave.

Tickets \$1.50

Tuesday, May 10, 1932

9:00 A. M. General Meeting.....Jerusalem Temple
Mrs. Arthur B. McGlothlin, *presiding*

12:30 P. M. Buffet Luncheon.....Jerusalem Temple

Tickets \$1.00

2:00 P. M. Walk through Vieux Carre, with Guides—
Starting from the Patio Royale

4:00 P. M. Tea.....Patio Royale

8:00 P. M. General Meeting of the American Medical Association.....Auditorium

10:00 P. M. Reception and Dance in Honor of the Woman's Auxiliary.....Tip Top Inn, Roosevelt Hotel

Hosts: Orleans Parish Medical Society

Wednesday, May 11, 1932

9:00 A. M. General Meeting.....Jerusalem Temple
Mrs. Arthur B. McGlothlin, *presiding*

12:30 P. M. *Auxiliary Luncheon.....Southern Yacht Club
(12 Minutes from Canal Street or Jerusalem Temple.
Luncheon tickets, \$1.50; Transportation, 25 cts.)

2:30 P. M. Post-Convention Board Meeting
.....Southern Yacht Club

2:30 P. M. *Through Garden Gates; Glimpses of New Orleans

4:00 P. M. Teas in Private Residences
NEW ORLEANS COUNTRY CLUB

8:30 P. M. Divertissements in the Garden

10:00 P. M. Buffet Supper
Negro Spirituals, Courtesy of the Woman's Auxiliary to the Louisiana State Medical Society

Thursday, May 12, 1932

9:00 A. M. General Meeting.....Jerusalem Temple
Mrs. Walter Jackson Freeman, *presiding*

10:00 to 10:50 Special Round Table Conferences

11:00 to 11:50Jerusalem Temple

12:00 M. Buffet Luncheon.....Jerusalem Temple

Tickets \$1.00

1:00 P. M. *Trip to Oak Alley Plantation; visiting Spillway. Returning at 6 P. M. (Round trip, \$2 per person)

or
2:00 P. M. *Round-trip over Lake Pontchartrain, via New Bridges (\$2 per person)

or
2:30 P. M. *Trip to Versailles Plantation, Battle Field of New Orleans; Docks and Wharves (Round trip \$1 per person)

or
2:30 P. M. *Delgado Museum and City Park; Newcomb Art School and Audubon Park (Round-trip \$1 per person)

or
2:30 P. M. *Mayan Exhibit, Tulane University (Round-trip, 25 cts. per person)

9:00 P. M. President's Reception and Ball.....Auditorium

Friday, May 13, 1932

9:00 A. M. *Trip to Gulf Coast—Leaving L. & N. Station at 9 A. M., returning to New Orleans at 6 P. M. (Round trip, including luncheon and beautiful scenic drive along the coast, \$6.00 per person)

10:00 A. M. Golf Tournament.....Metairie Golf Club

*Transportation paid by individual

All trips start from Jerusalem Temple.

MRS. CHAS. J. BARONE,
Chairman Publicity Committee.

MANAGEMENT OF ACUTE BRAIN INJURIES

Claude C. Coleman, Richmond, Va., discusses certain observations made on a series of 596 patients who received treatment in the Hospital Division of the Medical College of Virginia during a period of five years, closing Jan. 1, 1929. The methods employed in the treatment of this group are briefly reviewed. Of these 596 patients, 453 had head injuries of sufficient severity to produce a demonstrable fracture of the skull or unconsciousness, or both. There were 275 demonstrated fractures of the skull in this series. Of the group of 596, 143 are excluded from consideration here because of the fact that, although they had head injuries requiring a stay in the hospital, they were injuries of a mild type. In the group of 453 under consideration, 78 cranial operations were performed, and of these operations 32, or 7 per cent, were subtemporal decompressions, 22 on the right side and 10 on the left. In the 453 cases there were 84 deaths, a mortality of 18.5 per cent, 34 patients dying in less than twelve hours, and 50 after this period. The mortality is and probably will remain inevitably high in those patients severely shocked from extensive damage to the basal structures and widespread laceration and contusion of the brain. A smaller group, because of high intracranial pressure due to contusion with edema and to subdural and extradural hemorrhages, will require a subtemporal decompression or some form of operation for removal of the clot. The series shows that subtemporal decompression with drainage was done in more than 7 per cent of the cases, to offset intracranial pressure when there were no localizing symptoms. In the author's experience, palliative measures, such as dehydration, hypertonic solutions and therapeutic spinal puncture, cannot be advantageously substituted for subtemporal decompression with drainage in all cases of brain injury. The patients in the series who urgently needed relief from compression did better with operation, frequently combined with these more simple measures. If it is necessary to use ether anesthesia in order to perform a subtemporal decompression, this should be noted as a relative contraindication to operation, but the urgent need for relief from pressure may nevertheless require operation. Cranial operations for trauma can generally be done with local anesthesia.—*Journal A. M. A.*

THE DOCTOR'S LIBRARY

MEDICAL CLINICS OF NORTH AMERICA. (Issued serially, one number every other month.) Volume 15, No. 4 (Boston Number—January, 1932). Octavo of 268 pages with 18 illustrations. Per Clinic Year, July, 1931, to May, 1932, Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1932.

A CLINICAL STUDY OF THE ABDOMINAL CAVITY AND PERITONEUM (A HOEBER SURGICAL MONOGRAPH). By E. M. Livingston, Associate Visiting Surgeon, Bellevue Hospital, N. Y.; 866 pp., 372 illust. Paul B. Hoeber, Inc., New York, 1932. \$15.00.

A noteworthy effort to stress the fundamentals of anatomy, physiology and chemistry is evident in a number of clinical monographs of the past year or so. The present work is an exceptional example of this method. The material, intended as a comprehensive "post-graduate" study of the abdomen, is organized into three general topics, (1) the abdominal walls and cavity, (2) the abdominal contents and (3) visceral neurology. At each stage, anatomical and functional relationships are accompanied by descriptions of the pathology, clinical symptoms and methods of examination. Clarity is the effect produced by the numerous diagrams, charts and photographs.

The work is written for both the clinician and the student. For the former, a full index and marginal notes make the material easily available. Structure, function, pathology and the clinical phases of the subject are dealt with in adjacent pages. The student will find the work well organized. Fundamentals are stressed and the anatomy is treated from the standpoint of its mechanical importance rather than in the usual textbook approach. A questionnaire of over a thousand items will aid in the review and mastery of any topic treated in the text.

A summary of the important classical studies on the abdomen, usually with facsimile reproductions of the important pages of the original articles, and a concise account of the authors, provides a section of no little historical interest.

—W. T. D.

FEMALE SEX HORMONOLOGY. By William P. Graves, A.B., M.D., F.A.C.S., Professor of Gynecology at Harvard Medical School; Surgeon-in-Chief to the Free Hospital for Women and to the Parkway Hospital, Brookline, Massachusetts. 131 pages, with illustrations. Philadelphia and London: W. B. Saunders Company, 1931. Cloth, \$3.50.

According to the author this monograph is intended to furnish a concrete picture of a complex subject. The plan presents in chronological order the steps by which this particular department of medicine within three decades has risen from a position of insignificance to a stage that is highly scientific. Among the subjects treated are, The Early History of the Female Sex Gland; The Sexual Cycle in Animals; Sex Cycles in the Ovary; Sex Cycle of the Human Uterus and Its Correlation with that of the Ovary; The Search for the Hormones of the Ovary; The Discovery of the Hypophysis as an Agent in the Sexual and Reproductive Cycles; The Hormones of the Anterior Lobe of the Hypophysis Identified; New Theories Regarding Menstruation and Parturition as well as Lactation. There is a chapter on Organotherapy. A leading feature of the work is the Glossary of seventeen pages dealing with the terms that have been brought into use in the evolution of the subject.

APPLIED PHARMACOLOGY. By A. J. Clark, M.C., M.D., F.R.C.P., Professor of Materia Medica and Pharmacology in the University of Edinburgh. Formerly

Professor of Pharmacology in the University of Cape Town and later in the University of London. Fourth Edition with 72 illustrations, Philadelphia, P. Blakiston's Son & Company, Inc. 1932. Price \$4.00.

This book is a storehouse of very valuable information on the action of drugs. The fourth edition has made it possible to include a number of features of recent development. The theory of Loewi on the action of drugs autonomic system is discussed as well as advances that have taken place in the past two years in the knowledge of endocrines and vitamins. There has been a complete revision of the chapter on Pharmacology of the Skin. The book is convenient in size and practical in its treatment of the various subjects. In addition to drugs proper there are chapters on Vitamins, Inorganic Metabolism and a very enlightening one on The Pharmacological Action of Radiations Including the X-rays and Radium. The book will be found to be a very valuable companion to a good work on therapeutics.

UNITED STATES ARMY X-RAY MANUAL. Authorized by the Surgeon-General of the Army, Second Edition. Re-written and Edited by Lt. Col. H. C. Pillsbury, M.C., U. S. A. 228 Illustrations. Paul B. Hoeber, Inc., New York, 1932.

The first edition of this little Manual appeared during the world war, having grown out of the necessity of something compact and to the point. It was a composite work. As stated at the time, "The Manual was not intended to be a complete treatise on Roentgenology, but in the portion devoted to X-ray diagnosis the aim had been to state as concisely and clearly as possible the facts that have been established by experience and to avoid all controversial points." Naturally conditions which prevailed during the stress of war have changed and the problems of the Roentgenologist are those incidental to meeting the needs of the laity. The chief changes noted in this second edition include descriptions and improvement in apparatus and in methods of interpretation during the past fourteen years. The subject of technic in the present edition occupies the entire chapter instead of being scattered throughout the work. While the book is still a Manual for the military Roentgenologist, it will be found of value to the Roentgenologist in private practice as well, as it contains a vast amount of information in available and compact form.

ULTRAVIOLET RADIATION USEFUL FOR THERAPEUTIC PURPOSES: SPECIFICATION OF MINIMUM INTENSITY, OR RADIANT FLUX

W. W. COBLENTZ, Washington, D. C., calls attention to the fact that, in the literature, statements occur that in ultraviolet irradiation the production of an erythema is unnecessary; that a suberythema dose is sufficient for the maintenance of health. However, without physical or photochemical measurements, the erythema test is the only means of determining whether appreciable ultraviolet is emitted by the source. Hence, while such statements may be made in good faith, they open the way to fraud by irresponsible vendors of alleged sources of ultraviolet radiation. Hence, there is need of a specification of ultraviolet intensity. In this connection it is of interest to note that the spectral erythemic reaction is produced only by ultraviolet rays of wavelengths shorter than about 315 millimicrons, with a maximum reaction at the wavelength 297 millimicrons (2,967 angstrom units) and a lesser maximum (55 per cent) in the region of 250 millimicrons. It is to be noted also that in a very gen-

eral way the spectral erythemic response coincides with the photochemical reaction in the activation of ergosterol (which has the property of curing rickets) and in the curing of rickets by ultraviolet irradiation. However, this fact is considered merely a coincidence that is useful in the evaluation of the output of different sources of ultraviolet radiation and in the specification of the minimum ultraviolet flux (in microwatts per square centimeter) necessary to insure effective results in ultraviolet radiation therapy, as for example in the healing of rickets. By effective results is meant effecting a cure as quickly and as cheaply as by medicaments. This includes the expense of electric power, heating of the room, service of an attendant, and any factors that may subject the child to other ills (common colds in home treatments) than the one for which ultraviolet is being administered. On this basis, the specification of a minimum ultraviolet radiant flux, of wavelengths less than and including 313 millimicrons, was arrived at from a consideration of experimental data and general survey of the question. According to this specification the intensity (radiant flux) from sources of heterogeneous ultraviolet radiation, of wavelengths less than and including 313 millimicrons, evaluated according to the spectral erythemic response curve, should not be less than the equivalent of 20 microwatts (200 ergs) per square centimeter of homogeneous radiation of the wavelength of maximum erythemogenic effectiveness, which wavelength for practical purposes is taken at the emission line of mercury vapor, 2,967 angstroms (297 millimicrons).—*Journal A. M. A.*

SUPRAPUBIC PROSTATECTOMY WITH CLOSURE OF BLADDER

Alexander Hamilton Peacock, Seattle, believes that the success of primary closure of the urinary bladder depends on perfect hemostasis of the prostatic bed and good drainage by catheter. Suture of the capsule is surgically correct and can be performed by ordinary surgical skill and instruments. Primary closure of the bladder affords a shorter and more comfortable convalescence. Suture of the prostatic capsule produces better anatomic and functional results. With this method, post-operative bleeding has been practically eliminated. The sloughing post-operative wound is a thing of the past. Objections raised to closure of the bladder can be refuted by the good results of those surgeons now employing the close method of suprapubic prostatectomy.—*Journal A. M. A.*

UNUSUAL SKIN REACTION TO EPINEPHRINE

According to R. W. Lamson and S. O. Chambers, Los Angeles, the subcutaneous administration of epinephrine may be attended with certain protracted or even permanent manifestations. In one patient observed by them so small a dose as 0.2 c.c. caused a definite anemia of the skin in an area of at least 3 cm. in diameter. This anemic area was observed more than six hours after the injection, and somewhat larger doses have prolonged such manifestations for a period of from twenty-four to thirty-six hours. In spite of such protracted action with accompanying anemia of the skin, no permanent change was observed. The skin immediately around the site of injection shows marked atrophy suggesting the appearance of the foveated scar which follows a "primary" vaccine virus reaction. These unusual reactions may represent a local hypersensitivity or idiosyncrasy to the drug, but they have not been accompanied by any untoward systemic responses.—*Journal A. M. A.*

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CONTENTS

Intracranial Injuries of the Fetus. Fred L. Adair, M.A., M.D.....	363	Famous Men in Medical History: Victor C. Vaughan. By Charles H. McIntyre.....	410
A Few Skin and Mucous Membrane Lesions of Interest to General Medicine. George H. Belote, M.S., M.D.....	368	Editorial:	
Behavior Problems in Children. Brenton M. Hamil, M.D.....	373	Post-Graduate Medicine.....	419
Intestinal Obstruction. Harold E. Veldman, M.D., and Frederick C. Warnshuis, M.D.....	379	County Committees on Medical Economics..	419
Convalescent Serum. Edgar E. Martmer, M.D....	383	The Social Training of the Physician and Surgeon	420
Appendicitis. W. W. MacGregor, M.D.....	386	The Eighteenth Amendment.....	420
Beneficial Effect of N-Propyl Disulphide in Polycythemia Vera. E. A. Sharp, M.D., E. C. Vonderheide, M.D., and R. M. McKean, M.D.....	394	Commercial X-ray Laboratories.....	421
A Case of Allonal Poisoning. N. W. Larkum, Ph.D.....	395	Vitamin C Isolated.....	421
Effect of Evaporated Milk on the Incidence of Rickets in Infants. Donald J. Barnes, M.D.	397	Fifty Years Since Darwin's Death.....	422
Report of Case of Chyle Cyst of the Mesentery. A. L. Arnold, Jr., M.D., F.A.C.S.....	399	Logic	422
Abdominal Operations for Femoral Hernia. Glenn L. Coan, M.D.....	401	Periodic Health Examination.....	423
A Trip to Russia—August and September, 1931. Robert McGregor, M.D.....	404	A Bit of Medical History.....	423
Michigan's Department of Health. C. C. Slemons, Dr.P.H., M.D.....	409	Medical Economics:	
		Can We Afford State Medicine? Part IV. J. G. R. Manwaring, M.D.....	427
		General News and Announcements.....	428
		Obituary	429
		Communications	430
		Society Activity	430
		County Societies.....	432
		Woman's Auxiliary	433
		The Doctor's Library.....	434
		Of General Medical and Surgical Interest.....	435

INTRACRANIAL INJURIES OF THE FETUS*

FRED L. ADAIR, M.A., M.D.†

Professor of Obstetrics and Gynecology, The University of Chicago
CHICAGO, ILLINOIS

It would be difficult to overestimate the importance of these brain injuries. Trauma done to other portions of the nervous system, especially to the spinal cord, are also of tremendous importance, as are the injuries of the peripheral nerves of which damage to the brachial plexus is not uncommon. Unassociated with other injuries those of the peripheral nervous system do not usually result fatally. Cord injuries, especially those of the cervical cord, are responsible for many fatalities and are particularly common following version and breech extraction.

Traumatic lesions of the peripheral nerves and of the cord at various levels are responsible for much of the permanent disability

resulting from birth trauma. The orthopedists, neurologists, and pediatricists see many of the unfavorable results so often charged to the obstetricians, who may be cognizant of the immediate results but too infrequently follow up the remote consequences of the la-

*Read before the Section of Obstetrics and Gynecology of the Michigan State Medical Society at its annual meeting in Pontiac, Michigan, September 23-24, 1931.

†Dr. Adair is Professor of Obstetrics and Gynecology in the University of Chicago and also the Medical Director of Chicago Lying-in Hospital and Dispensaries.

bors and deliveries. There are many visceral and other injuries which can properly be attributed to labor, but it is not possible to give consideration to all the manifold injuries which may occur in association with parturition.

I have selected the intracranial type of injury because the importance of these injuries is not generally recognized and the symptoms are often attributed to the so-called asphyxia neonatorum. Suffocation and aspiration occur quite frequently and are caused by a variety of conditions leading to interference with the proper oxygenation of the fetal blood, which results in circulatory changes. Suffocation leads to premature attempts at respiration, with the dangers of aspiration of various materials. Alterations in the circulation and pressure within the cranium lead to circulatory changes in the fetus, which in turn may cause stimulation or paralysis of the respiratory center and cause the so-called asphyxia neonatorum, either livida or pallida, which may or may not be complicated with aspiration.

The simplest form of intracranial injury is from the long continued intermittently increased and decreased pressure on the fetal head, especially after it passes the inlet. The caput succedaneum with the ecchymosis and edema of the scalp and the less frequent but more important cephalhematoma externa have their counterparts in the edema, petechial hemorrhages and cephalhematoma interna which occur within the cranial cavity. These lesser injuries pass through various intermediate stages to the most serious and extensive trauma, with fractures of the bones, tearing of the intracranial membranes, extensive hemorrhages and lacerations of brain substance.

In more recent years more attention has been given to the pathologic study of the fetus and the newly born infant. At first the method of opening the cranium was the same as that used in the adult. This failed to reveal many of the lesions which were present, but not discovered. Beneke described a technic of opening the parietal bones which exposed the brain and membranes with a minimum of disturbance to the normal relations. A study of intracranial conditions in the fetus and newly born by this method shows the true picture and gives an accurate idea of the frequency and extent of intracranial trauma.

Vital statistics seem to show an increase in the mortality rate during early infancy due to birth trauma. This is probably not due to an actual increase in the relative or actual number of infant deaths due to traumatic causes so much as it is to the recognition of trauma as a cause of death and the diagnosis of intracranial injuries from the symptoms and findings.

Autopsy findings are often quite conclusive though there are borderline cases with passive congestion, petechial hemorrhages and edema where it is difficult to estimate the amount of damage done to the brain cells. One frequently hears of intracranial hemorrhage and while that is a perfectly correct expression of a definite finding I prefer to focus attention upon the trauma. It is the injury to the brain cells which is really of the greatest significance, but the most difficult to demonstrate.

The two best criteria we have for determining trauma to the brain are hemorrhage and laceration of the dural membranes.

Autopsies on stillborn and neonatal infants have given us much information relative to the character and frequency of these intracranial injuries and also with regard to the etiology and symptoms.

For a number of years past I have been interested in fetal autopsies, and the Department of Obstetrics and Gynecology ran a considerable series of about 1,000 at the Medical School of the University of Minnesota. These cases were secured from various hospitals and from private practitioners, and while the information was often incomplete the group probably represents a fair cross section of the results in the city at large. We have tabulated 961 cases and found that the largest single cause of death was birth trauma. Three hundred or 31.2 per cent of the deaths were assigned to this cause, and if the antepartum fetal deaths are excluded there remain 718 intrapartum and postpartum deaths, which raises the percentage of traumatic deaths to 41.8 among the fetuses which were alive at the onset of labor. It is only fair to remark that in 105 cases the evidence of birth trauma was not absolute and that 151 of the cases were pre-viable or premature. If one considers the term cases alone there was a percentage incidence of definite and probable birth trauma of 39.7 and a definite diagnosis in 31 per cent. The oversized or postmature infants gave a somewhat higher incidence.

It is important to note that of the 300 cases assigned to birth trauma as the cause of death, such a clinical diagnosis was furnished in only four, and this cause appears on about 75 of the stillbirth certificates. It is of interest to observe that of 39 cases which were clinically diagnosed as asphyxia 22 were assigned to the birth trauma group as the result of findings at the autopsy.

Such factors as parity and type of pelvis undoubtedly influence the incidence of birth trauma, but our data on these factors are not conclusive. Induction of labor was done for various reasons in 120 cases. Thirty-eight of these fetuses died antepartum. Among the remainder there were only 31 in whom there was no evidence of trauma.

The time of rupture of the membranes seems to be a factor, and the incidence of birth trauma was highest where the membranes ruptured at the onset of labor (61.9) and during the first stage (46.0).

In 109 cases of placenta prævia and abruptio placentaë birth trauma was the probable cause of death in 31, or 28.5%, and suffocation and aspiration in 47 cases, or 43.1%.

The fetal position and the duration of labor are of undoubted importance. The occiput posterior positions show the highest percentage of cases with long labors. Intrapartum deaths also increase with the increased length of labor. The percentage incidence of traumatic deaths seems to increase with lengthened first and second stages of labor.

The incidence of fetal positions other than cephalic was relatively high, as there were 157 breech cases (17.9 per cent) and 24 cross presentations (2.7 per cent). The highest percentage of trauma was in the breech and transverse positions.

There is a definite relationship between the type of delivery and birth trauma as 26.0 per cent of the spontaneous deliveries, 47.3 per cent of those delivered by instruments and 58.9 per cent of breech extraction and version, showed birth trauma. Evidence of trauma was also found in a high percentage of those infants who were delivered by cesarean section.

The age of the fetus is unquestionably a factor in the production of birth trauma. The percentage incidence of injury is highest in the term and postmature groups, but is partially responsible for the death of a fourth of the previable and premature infants.

There are many factors, mostly mechanical, which are etiologic in the production of intracranial injury. The fetus itself presents many variations in maturity, size, shape, position as well as differences in skeletal and soft tissues which are contributory factors and for the most part not easily subjected to control. On the maternal side there are conditions which make induction of labor, terminations of labor, etc., necessary even though these procedures increase the hazard to the fetus. The mother may have toxic or diseased conditions which affect the fetus and make it more susceptible to injury. There are also certain other contributory factors of considerable importance which may not affect the maternal health. These include deformed pelvis, resistant soft parts, abnormal uterine contractions, either excessive or weak, the presence of neoplasms and various other less frequently occurring conditions.

The anatomy and structure of the bony pelvis and soft parts, as well as the structure of the fetal head, while mutually adjusted to permit of the passage of the fetus through the birth canal by the complicated mechanism of labor, are not designed to secure minimal risk to mother and infant. It would be easy to conceive of a much simpler mechanical arrangement if that were the only purpose to be accomplished by the human organism and there were no other functions to perform.

One of the simplest mechanical factors entering into the production of intracranial birth injuries is the variation in the pressure applied to the fetus in utero as compared with the more or less exposed portion of the presenting part, usually the head, which lies in the birth canal and is subjected to a different degree of pressure, especially subsequent to the rupture of the membrane, than the higher lying intrauterine portion of the fetus. It is the same mechanical principle which results in the edema and hemorrhage into the tissue of the presenting part. When the head is presenting, the same mechanical process operates on the intracranial structures and may lead to the occurrence of edema and even hemorrhages within the cranial cavity.

Another relatively simple mechanical principle which results in intracranial injury is seen in the short violent labors where the uterine contractions thrust the head into the parturient canal against the soft parts and

the bony pelvis with a violence which drives the fetus through the canal within a relatively short time. This type of case is not usually accompanied by head moulding, but is undoubtedly associated with alternating compression and decompression of the fetal head which results in marked changes within the cranial cavity which may provoke edema, hemorrhage and laceration of the dural membranes.

A similar mechanical phenomenon is sometimes associated with moulding of the head as the result of continued pressure, which is the sequence of uterine contractions which force a snugly fitting head into the birth canal. As a result of this adaptation of the head to the size of the parturient canal a similar condition results which is known as head moulding. Holland of England has studied this condition in a series of stillbirths, and considers it of very great importance. The fetal head is, of course, made up of the cranial bones, which are more or less movable on account of the open fontanelles and ununited sutures. Within the head we have the dural membranes and dural folds, of which the falx cerebri and tentorium cerebelli are of particular importance. In the falx there are certain fibres or bands which are distributed at various intervals throughout the falx, but tend to fuse at the point where the falx bifurcates and unites with the tentorium cerebelli. He has termed these fibres "stress bands." The head moulding results in the shortening of the anteroposterior diameter of the head in the occipito-frontal or occipito-bregmatic diameter, resulting in lengthening of the occipito-mental diameter. This shortening of the head in one diameter and lengthening in another produces uneven tension on the falx which seems to culminate in the maximum force at or near the attachment of the falx to the tentorium. Closely identified in this region of the maximum stress is the vein of Galen and its tributaries. When the force applied results in an elongation of the head sufficient to tear the dural folds, the laceration is not infrequently located in this region and is associated with resultant hemorrhages from this vein or its tributaries. In other cases there is an actual tearing of the tentorium which may result in tentorial or subtentorial hemorrhage with increased intracranial pressure around the cerebellum and medulla. Of course, other injuries may be imparted to the head which result in pete-

chial and other parenchymatous hemorrhages, bleeding into the ventricles, the cephalhematoma interna, and diffuse epidural hemorrhage.

Another mechanical factor of considerable importance in the production of intracranial injury is the depression of the occipital bone. One who notes the delivery of the head through the pelvic outlet frequently observes that the occipital bone occupies a lower level and is overridden by the parietal bones as it emerges under the pubic symphysis. This depression of the occipital bone may occur with cephalic, especially occipital presentations, where the occiput has rotated to an anterior position, as it usually does. This depression is produced by a resistance of the pelvic floor which maintains the head in flexion and crowds it under the pubic arch. Where the pelvic outlet is small with a relatively short anteroposterior diameter or where the perineum is unusually resistant, the head may be held under the pubic arch with unusual force, especially at the acme of labor pains. This force may in some cases be sufficient to at least contribute to intracranial damage. This depression of the occipital bone produces tenseness and traction on the falx and tentorium and may result in lacerations of these structures and of the blood vessels, which may cause hemorrhage as well as undoubted injury of the brain cells, which also occurs in all the mechanisms previously described and associated with marked alterations of intracranial pressure.

Injuries are also definitely associated with artificial delivery, though one must not forget that many of them occur in connection with spontaneous labors, usually those which are short and violent or those which are unduly prolonged in either the first or second stage, but more particularly in the latter. They occur in all varieties of cephalic position and presentation, but are naturally more common in those which tend to produce a harder and longer labor. They also occur in transverse positions, breech deliveries, versions and extractions. In transverse positions, which are usually terminated by version and extraction, the damage is usually done to the aftercoming head as it is drawn through the parturient canal. The same factor enters into the production of injuries in breech deliveries with extraction. Instrumental deliveries, while at times unnecessarily blamed for intracranial dam-

age which has antedated the application of forceps, are frequently productive of harm. As might be expected, the frequency and severity of intracranial damage in instrumental deliveries depends not only upon the skill of the operator but also upon the position and height of the head when the forceps application is made. Low forceps deliveries are productive of less intracranial damage than those where the head occupies the higher level. Lateral compression of the head in the biparietal diameter apparently does not cause as much damage as forceps application in other cephalic diameters. Instrumental deliveries are not infrequently associated with fractures of the cranial bones, which may be accompanied by lacerations of the dural membrane, edema and intracranial hemorrhage. Fracture of the cranial bones also follows extraction in breech deliveries and version.

The management of infants with intracranial trauma subsequent to birth is of considerable importance. It is essential to recognize that many of the so-called asphyxiated infants have circulatory and respiratory disturbances because of intracranial damage. Such damage as has already been done should not be aggravated by violent methods of resuscitation. The baby should be treated gently in attempts to establish the normal circulation and respiration. The clearing of the respiratory passages, the maintenance of body temperature, the stimulation of respiration, the supplying of oxygen and the use of various means of artificial respiration are all of importance. The various vigorous methods of artificial resuscitation should be abandoned and gentle means be established. The administration of the mixture of carbon dioxide and oxygen may be of definite value, but ordinarily the child seems to respond to the administration of oxygen in the early stages of the establishment of respiration. The treatment of intracranial damage is absolute quiet, the maintenance of fluids, the control of body temperature, the occasional administration

of sedatives where the nervous system is irritable, the injection of whole citrated blood and the judicious use of spinal punctures.

The various types of injuries are depression and fracture of the cranial bones, with increased intracranial pressure, edema, hemorrhage and lacerations, cephalhematoma interna, hemorrhage from the blood vessels and sinuses, parenchymatous hemorrhages, ventricular hemorrhages, injuries of the dural membrane, especially the falx and tentorium, and damage to the brain substance.

The methods of prevention of brain injuries are: (1) Prenatal care by which attempts are made to bring the patient to term with the fetus in the proper position, and predetermining so far as possible the appropriate method of delivery. (2) Proper management during labor, with conservative conduct of the first stage, preservation of the membranes, the prevention of violent labors by the use of uterine sedatives and anesthetics if necessary, the avoidance of too prolonged pressure upon the fetal head in the birth canal or upon the perineum, the recognition of signs of fetal distress and the completion of the delivery when conditions are favorable. (3) Avoidance of undue occipital depression by its pressure against the pubic arch especially by vigorous attempts to protect the perineum. Also avoidance of delivering the aftercoming head in breech extraction and following version by using the occipital bone as the fulcrum of a lever in rotating and delivering the head over the perineum. (4) The restriction of the use of artificial means of delivery, to strict indications on the part of the mother or fetus when favorable conditions are present. (5) The selection of the proper time and method for artificial delivery and the use of good technic. (6) Lastly, the recognition of the fact that many of the infants which appear asphyxiated and do not breathe promptly or properly are in many instances traumatized and should be treated gently and not by strenuous attempts at stimulating respiration.

A FEW SKIN AND MUCOUS MEMBRANE LESIONS OF INTEREST TO GENERAL MEDICINE*

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Compared in age to medicine as a whole, dermatology is still an infant. I might add, however, that considering its age and growth curve, it must be considered precocious. Sired in conservatism by Willan a little more than a century ago, his death left no one of his school and teaching strong enough or convincing enough to firmly establish his principles. Hence, gloomy days fell on the art until the arrival of Hebra, nearly half a century later. Of course there were lesser rays of light between the two, but none of lasting significance.

The two names mentioned above are high lights of early dermatology, but Willan's influence was little felt outside of England. If he had carried more weight at the time, it is quite likely that the entire history of the specialty would have been altered.

With the coming of Hebra, we meet a man who is described as an "acute observer, a stupendous reader and an original thinker."¹ But with all his virtues, he lacked the power to correlate facts. He was a pure morphologist and his work marks the separation of dermatology as a specialty from medicine in general. What a pity Hebra and Willan were not contemporaries. Together they could have achieved far greater results.

With the infinite zeal which is characteristic of his type of mind, Hebra set about describing, classifying and naming the various dermatologic conditions which came under his observing eye. His virtue lies in the thoroughness with which he did his work, for he named a large portion of the conditions known today. His work constitutes the beginning point for all who would know something about the specialty.

The difficulty with Hebra's work is that he named conditions on a purely morphologic basis and from the standpoint of a pure morphologist. No attempt was made to correlate these conditions with the remainder of the body, and the result was an excessively heavy nomenclature seemingly without rhyme or reason and before which the average physician turns tail and runs.

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There are still those who attempt to ridicule the fine differential points in dermatology, but before they do so, let them remember that this work was done at a time when internal medicine had just gotten past the stage of watching the ants on an ant hill for evidence of glycosuria.

Since Hebra, much water has passed under the bridge but we are still far from the sea. His pupils and every thinking dermatologist since that time have been busy trying to correlate the things early described and named with the remainder of the organism. The tendency ever since has been toward a closer association with medicine as a whole and that tendency has never been stronger than it is today. We have come to realize that the skin is simply one of many organs and like any other organ it is subject to many influences. What influences the organism as a whole is likely to be reflected in the skin and, in addition, there are many purely external causes of dermatoses. The person who insists on being a pure externist as regards the etiology of dermatologic lesions is just as far wrong as the person who insists upon an internal origin for them. There is a proper middle ground and the ability to recognize which are likely to be external and which internal depends upon long training and acute observation.

Let me illustrate the modern attempt to correlate the old cumbersome names in dermatology with internal medicine. About 1868 Hebra described pityriasis rubra. The name means only red scaling, is purely externally descriptive and gives no clue as to the possible cause. From the description of the early cases they might fit into our conception of any severe exfoliative dermatitis. But we have learned that exfoliative der-

matitis may be due to many causes, and it is a sign and a symptom rather than a disease. It may be caused by external factors such as the local application of chemical irritants, by the injection or ingestion of various drugs, it may be the end-result of a preëxisting dermatosis, or it may be the first sign of a cellular malignancy of the lymphoblastoma group. To make such a diagnosis and walk proudly off at the present time is like throwing a life preserver loaded with lead to a drowning man. It simply isn't done.

Recently the available cases of so-called pityriasis rubra have been reviewed by Barney² and practically all of them have been shown to be associated with grave medical conditions and a large portion of them specifically manifestations of the lymphoblastoma group. It is the response of the skin to a generally injured organism.

For some unknown reason, we in Ann Arbor have been privileged to observe a large number of the lymphoblastomas, including leukemia cutis, lymphosarcoma, granuloma fungoides and Hodgkin's Disease, beginning as far as we can tell with changes in the skin. This group as a whole can produce practically all known dermatologic lesions, but the one manifestation of which we are continuously suspicious is a severe exfoliative dermatitis, for which we can find no other etiology and which does not clear up promptly under bland local therapy. These changes often appear in the skin long before they can be demonstrated in the blood stream or lymph nodes and we have had many cases under observation, diagnosed by clinical and biopsy findings, a period of years before they developed the typical findings of the group from the medical standpoint. And our experience with autopsy material has taught us not to be too sure from the clinical picture just what the post-mortem findings will be. Clinically these conditions present fairly typical pictures, but in the light of our present knowledge we are not at all surprised to have a competent pathologist report the findings of lymphosarcoma in a postmortem specimen who as a patient was characteristically labelled granuloma fungoides. The interesting point is that fifty years ago most of these cases would have been called pityriasis rubra with little thought of the underlying general condition. Today they are definitely hooked up with conditions usually considered the realm of the internist.

But dermatologists have no corner on the naming of so-called disease entities and some others have done about as badly. Shortly before Hebra described and named pityriasis rubra, Moeller described and named a glossitis which has since been called by his name. The original description consisted of six cases, all in women, of excessively painful and burning tongues. Clinically they presented slightly varying pictures of persistent exfoliative plaques on the tongue. The one symptom common to all was excessive burning and none recovered. Harris³ in 1915 reviewed the available cases of this condition and reports that five of the six original cases were infected with *bothriocephalus latus*, and I have always been curious to know if Moeller's glossitis in 1851 might not grow up to be a full blown pernicious anemia in 1931. Certainly Moeller's glossitis, if such an entity exists, is a rare bird at the present time although sore and burning tongue is fairly common.

The easily visible mucosæ are usually considered the legitimate field of the dermatologist and certainly he has done much to advance the knowledge of mucous membrane lesions. For this reason he is commonly called upon to make such diagnoses and many of the conditions are interesting. Some are purely local, some annoying to the patient but of no general significance, while others are direct manifestations of grave medical conditions.

Because of the recent cancer campaigns, we are called upon more and more for advice regarding purely harmless conditions which the patient never noticed until he began looking for cancer. Included in this group are Fordyce disease, scrotal tongue, hairy tongue and enlarged papillæ at the junction of the middle and posterior thirds. For the most part reassurance only is necessary in these cases.

The angiomas occurring in and around the buccal mucous membrane are annoying and disfiguring but seldom, except from the cosmetic standpoint, of grave medical importance to the patient. The one exception to this is the case of the small infant where the lesion interferes with feeding. Fortunately, practically all of these respond readily to roentgen and radium therapy and the time of application can usually be made a matter of choice.

Of the infectious processes occurring in

and around the buccal mucous membranes syphilis, tuberculosis and actinomycosis deserve special attention.

We have seen actinomycosis limited to the tongue in the form of a deeply seated nodule, but this is not the common picture. The portal of entry is usually around the teeth and by the time the patient seeks help he has a fairly characteristic swelling of purplish red color in the region of the angle of the jaw and in the submaxillary region. Usually there are a number of draining sinuses externally to the skin and for this reason it may, superficially at least, resemble rather closely glandular tuberculosis. The diagnosis is rather easily established by finding the ray fungus in the fresh pus or in the stained specimen.

Tuberculosis of this region I mention at this time only to emphasize that it is practically always the result of more deeply seated tuberculosis which is usually advanced and hence carries a poor prognosis. The subject of tuberculosis of the skin and mucous membranes will be taken up in detail by Dr. Keim this afternoon.

Syphilis as it occurs in and around the oral cavity permits a study of practically all known syphilitic lesions. The tongue, lips and tonsils are the common sites for extragenital chancres, with a few on the chin, eyelid, nipple and finger thrown in for good measure. Regardless of their location, they usually retain their characteristics of painlessness, firm induration and early development of the satellite bubo. These extragenital primaries, however, are prone to develop to giant size and, unless they are kept constantly in mind, they will be missed.

Secondary syphilitic lesions of this region may be simple erosions, papulo-erosive, or they may be actually destructive as the analogue of the deeply seated pustular lesion of the glabrous skin. Confluence is not the rule in secondary syphilis, but even this is seen around the mouth and, more particularly, in the case of the newborn infant representing a congenital type probably acquired late in utero.

Tertiary syphilitic lesions in and around the mouth may be single or multiple. On the lip or the tongue the single gumma may closely simulate the chancre or cancer and at times a considerable diagnostic acumen is necessary to distinguish between them. On the face and away from the mucous membranes, the late lesions commonly take on

the typical nodulo-ulcerative characteristics with active confluence of nodules at the border, a clearing center and a fairly definite crescentic or serpiginous outline. It would pay you real dividends to get acquainted with this type of lesion.

In addition to the single gumma, the tongue may present two other types of late syphilitic involvement. As the result of the healing of multiple gummas, it may be extremely firm and deeply furrowed. Ordinarily it is paler than normal and when compared with the scrotal tongue it is found to be distinctly firmer. Because of increased size and stiffness it may even lack some mobility. This condition is commonly spoken of as interstitial glossitis and is fairly pathognomonic. Further, the surface may be distinctly smooth and atrophic although the whole tongue is increased in thickness. This represents the smooth atrophy of late lues and is regularly simulated only by pernicious anemia.

Of the premalignant lesions in and around the mouth, leukoplakia is the most common although keratoses develop at times on the vermilion border. Both are forerunners of trouble and if they show the slightest evidence of degeneration should be thoroughly destroyed. Cancer developing in this area is practically always of the squamous cell variety and hence half way measures should not be tolerated.

Cancer of the tongue and buccal mucous membrane commonly develops on the basis of leukoplakia although this is not necessarily true. In turn leukoplakia may result from many things, but the chief one is chronic irritation of some sort. Rough and carious teeth should be repaired and all other forms of irritation avoided. It is here interesting to note that we⁴ have found 30 per cent of our cases of carcinoma of the tongue associated with syphilis and hence would warn against ruling out malignancy on the basis of a positive blood test. In our experience gumma of the mucous membrane of the oral cavity provides a fertile soil for the production of cancer. They are commonly associated.

Before leaving the oral cavity there is one symptom which I wish to consider further. It is that of sore tongue. I remarked awhile ago that the easily visible mucosæ are commonly considered the legitimate field of the dermatologist and hence many complaints of this sort come to him or are referred to him.

There are many external and traumatic causes for this complaint, but I do not wish to consider them at this time. There are two types that I do wish to call to your attention. The first of these is the type associated with pernicious anemia and the complaint is commonly excessive burning. Examination reveals a tongue which is paler than normal and presenting a smooth atrophy similar to that seen in late lues but not as firm as the latter. Further history often elicits the presence of slight parasthesias and the combination often leads to the proper diagnosis long before the advanced changes occur. From this standpoint it is important not to pass up a complaint of sore tongue until we are reasonably sure it is not a manifestation of a grave medical condition.

Compare, please, with the picture just mentioned a much more common and less serious condition known as glossitis marginalis erosivum. The name correctly describes the lesions, as they are usually marginal erosions rather more brightly red than normal and surrounded by an ivory white border. The tongue is sore, but if we happen to know the other name for this condition (benign transitory plaques) we also know that they will not last. The lesions are rapidly migratory in character and in this respect differ from the lesions of secondary syphilis. This condition is practically always associated with gastro-intestinal disturbance and, if the underlying medical condition is not corrected, they will most certainly recur.

Let us consider now for a few moments the deficiency diseases with dermatological lesions which we meet in Michigan, and if you have not thought of them in this light before the list is somewhat surprising. It includes pellagra, acrodynia, scurvy, myxedema, Addison's syndrome and diabetes as the most important. Nearly all have outstanding dermatological aspects from which the diagnosis can be made with very little help.

Pellagra we used to consider a disease of southern institutions, but this is no longer true. It has become fairly common in Michigan and we see about a dozen cases each year at the University Hospital. The features of all are so nearly the same that the diagnosis becomes easy after a few cases have been seen. The outstanding features are the dermatitis and pigmentation limited

to the exposed surfaces. On the hands and feet this is confined to the dorsa and partakes of the glove and stocking distribution. The buccal mucosae and tongue are brilliantly red and commonly described as beefy, and if one needs further evidence he will find it in the diarrhea, mental symptoms and cord changes which go along with the advanced case. If, however, one is aware of its existence and the dermatological lesions which ordinarily are fairly early manifestations, it may be recognized and treated before it is hopeless.

Acrodynia or pink disease is considered by many a disease of the infant analogous to pellagra in the adult. This is by no means proved as yet. It is another fairly recently recognized disease, the signs and symptoms of which are characteristic. Beginning with an irritability, the infant soon develops a marked redness of the palms and soles which later may become a generalized eruption. Accompanying this there is a marked photophobia and when exposed to light the child assumes a characteristic burrowing attitude, burying its head in the pillow to escape. The prognosis is not good.

For those who would liken this condition to pellagra, it should be pointed out that the dermatitis in acrodynia begins on the palms and soles whereas in pellagra it practically never involves these areas. Further, in acrodynia the dermatitis may rapidly become generalized, while in pellagra it is confined to the exposed surfaces. True there are some points of likeness, but the relation is not established.

In these enlightened days scurvy is somewhat a rarity, although it is occasionally seen. Those cases which have come to my attention have been associated with prolonged feeding with a certain brand of condensed milk. Advanced cases are usually easy of diagnosis, presenting spongy and bleeding gums, marked irritability, painful joint movement and at times large subcutaneous hemorrhages. X-ray of the joints and long bones is of distinct help and indeed occasional obscure cases can be diagnosed only with its help.

Myxedema, a type of thyroid deficiency, also presents fairly characteristic changes in the skin and its appendages. While the skin as a whole is thickened due to deep changes, there is no pitting edema. Because of this thickening, the facial lines are smoothed out and the skin is dry and in-

elastic. In addition, the hair is sparse and coarse. If we add to this the obvious mental retardation and the lowered basal metabolic rate, the diagnosis should be fairly obvious.

I speak of Addison's syndrome in this manner rather than Addison's disease because the original cases were due to tuberculosis of the adrenal only. The concept has now been broadened to include various types of adrenal deficiency and the originally described disease is only one of them. This patient usually comes to the internist because of his weakness and loss of weight, but he also presents fairly characteristic skin and mucous membrane changes. These consist of a varying degree of brown pigmentation early distributed in a zonal band about the waist line. The axillæ and groins are also early involved and a little later the buccal mucous membrane. The early pigment is distinctly brown but before death may progress to almost black.

Diabetes mellitus, of course, is due to partial pancreatic insufficiency and there are many associated dermatological lesions. Most common are furuncles, carbuncles and, in the elderly particularly, distal gangrene. We also see perforating ulcers over points of pressure which cannot be distinguished clinically from those seen in *tabes dorsalis*. Indeed the underlying pathology may be exactly the same for the cord changes are like those of the *tabes* of late *lues*. Occasionally we meet the rare bronze diabetic with his brown to slate gray color and enlarged liver. Usually, however, this patient is sick and he is recognized as a diabetic by the internist long before he is seen by the dermatologist. These enumerated lesions are so constantly associated with diabetes that anyone passing them up without a reasonable investigation is at the very least guilty of poor judgment.

The physician, himself, is occasionally to blame for the production of skin lesions. No drug was ever produced or ever will be produced to which some patients will not react abnormally. This becomes a question of idiosyncrasy or susceptibility on the part of the individual patient, but if we are to administer drugs we should know something about the type of reaction to expect. The most frequent offenders of a large list in

our experience are iodides, bromides, luminal and phenolphthalein.

The most common eruption due to both iodides and bromides is one resembling simple acne vulgaris. The lesions may be a little larger and a little more indolent, but in this form it has no great significance. It should serve as a warning. Continued administration, or if the patient is especially susceptible, may produce serious results. Fungating, purplish nodules of wide distribution or a bullous pemphigoid eruption may be produced by the iodides. In the case of the bromides the verrucous, inflammatory, excessively painful eruption peculiarly confined to the anterior surfaces of the tibiae is characteristic.

Luminal produces a morbiliform type of eruption of a highly pruritic nature and it occurs fairly frequently in the incidence of its administration. No serious late effects have been noted but the patient is uncomfortable for the time being.

Phenolphthalein, which is a common constituent of cathartics now in use, fortunately produces an eruption but rarely. It begins with an itching and burning and carries on with the production of large red macules which ultimately involute leaving a dark brownish black pigment. This pigment is relatively permanent and the old lesions flare up with each new administration of the drug. Once seen it is easily recognized, but if not kept in mind it may cause considerable discomfort both from the standpoint of the cosmetic effect and physical suffering.

I realize that I have not covered the field. I have tried to show you a few of the interesting lesions which we commonly meet and most of which have some interest in general medicine. I have tried to show that after all dermatology is not so far separated from general medicine and I might predict that when the difficulties of biochemistry have been overcome and when we have a better understanding of endocrinology and metabolism, they will be found closer together than we now admit.

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BEHAVIOR PROBLEMS IN CHILDREN*

PRACTICAL CONSIDERATION OF THEIR ANALYSIS AND TREATMENT IN PRACTICE

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The present status of Mental Hygiene and Child Guidance was convincingly expressed by Dr. Bronson Crothers¹ in a discussion of a paper at the Eighty-Second Annual Session of the American Medical Association. In preface to the consideration of behavior problems in everyday practice, I wish to present the following excerpts from that discussion:

"One who settles down to a study of the psychiatric and mental hygiene literature of the last twenty years finds two sorts of articles: For specialists in mental disease there is a large scientific literature, much of it highly controversial and relatively little of it very definite. This controversial and inconclusive status is obviously correct. . . . The lay and the general medical public is furnished a different intellectual fare. A genuine effort is being made to formulate statements which will convey to all intelligent people a fair impression of the present assets of the modern science of psychiatry. This effort is clearly sound. It is possible, however, to quarrel with certain efforts to arouse general interest in the whole subject. . . . The general practitioner is admittedly a necessary element in an efficient mental hygiene program. His present lot is not a happy one. He is told what is expected from him as to results but given little information as to procedure. . . . Much has been written which suggests that the field of mental hygiene is relatively unoccupied. This idea seems to me of doubtful validity. I should think it was over-crowded. It is admittedly difficult to classify and appraise the people who are giving advice. Psychiatrists, psychologists, progressive teachers, educators of parents, informal and formal child guidance organizations are in the field already. It is, however, perfectly clear that the very confusion which now exists furnishes the best of reasons for active and persistent interest by the general practitioner. . . . I am convinced that there is such a thing as "psychiatric intelligence," in the phrase of Dr. Esther Richards, which can be developed by general practitioners. . . . The eager and intelligent physician may find ways of selecting information and attitudes which, for him, are more effective than those chosen for him. In any case a hopeful, interesting and profitable field of effort is open to the practitioner."

I present this because I believe it to be a well-stated, unbiased, conservative evaluation of the mental hygiene and child guidance movement. In addition to thinking that "psychiatric intelligence"² can be developed by general practitioners, I believe that the successful physician who has mastered the great art of the practice of medicine has psychiatric intelligence in balance proportionate to his success as a physician, not nec-

essarily in terms of income, but in treatment results.

Behavior, whether it is that which is considered normal or in other words acceptable to society as a whole, or whether it is abnormal or objectionable to the majority, is the reaction of the individual member of society according to the "sum-total" of his experiences. This reaction, according to predominance of certain factors in his physical, mental or emotional experience, assumes a certain pattern for each individual. This pattern is made up of various reactions or symptomatic behavior. According to the predominance of certain symptoms of behavior or the pattern which occurs most often, some mechanism indicating a disturbed affective or feeling state is manifested.³

In dealing with behavior problems in children, mechanisms are of value in considering the personalities of the adults associated with the child. A child is largely what he is because of the personalities or behavior patterns of the adults in association with whom he has been receiving his life experiences.^{4, 5} It follows, then, that in addition to treating the child, and more important, it is necessary to treat the parents or other adults responsible for the child's maladjustments. This can be done only by knowing the why and wherefore of the primary mechanisms of the adult behavior which is responsible for the personality of the child.^{5, 6}

Many intelligent parents are able to analyze this why and wherefore of their own personalities without the aid of a physician or mental hygienist, not necessarily in psychological terms, but in common sense reasoning. More important, they are able to readjust their own attitudes toward society and their child, so that the manifested undesirable behavior is replaced by desirable behavior.

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Probably most physicians find few such parents among their clientele. Pediatricians particularly occasionally see such parents. There is a fairly large group, perhaps three-fifths of all the parents seen in pediatric practice, who, with a timely warning and frequent reassurance, can find and refine themselves and make adjustments which result in a desirable personality in their child. A smaller group consists of parents who are conflicted to the extent that they are capable of little or no insight. They will need some degree of psychiatric management by either the family physician or a psychiatrist. They and their children will need repeated contacts by trained individuals for proper suggestion, recreational or vocational guidance and companionship. It may even be necessary to place the child out of the home into a suitable environment to facilitate a healthy readjustment.

Our first step as physicians in approach to handling behavior problems or maladjustments in our patients should be to look into our own lives and try to fathom the complexity of our own personalities.⁷ This is necessary in order that we shall not identify ourselves with the patient or members of his environment and be biased in our analysis of the causative factors of the faulty behavior.

Our next step is to realize that no two individuals are alike. Each one is born with somewhat different potentialities for personality development. Each personality is dependent upon the physical endowment at birth and at any stage of life is the result or "sum-total" of physical, mental and emotional experiences. The behavior of the individual will reflect the habit conditioning which he has acquired in response to these past experiences.⁸ Most of these experiences are obtained in the immediate environment of his existence, and in treatment, the consideration of the personalities and attitudes of the members of this immediate environment and the needs and drives behind them^{4, 5} is of primary importance in achievement of alteration of the personality pattern of the patient.

Our third realization should be that in everyday practice such readjustments are repeatedly being facilitated by the successful practitioner. Some cases are sufficiently complicated that for successful treatment they require the services of those especially trained for this work. It is our duty to the patient, his family and society as a whole to

see that the best advice and management available are obtained for him.

Prevention is one of the greatest functions of the physician in consideration of behavior problems. The physician who is interested in the human side of practice will make an effort to know his patients sufficiently well that it will be possible for him to suspect existing family disharmonies and give advice in such a way as to allow the parents no excuse for faulty management of their child. In order to do this he should endeavor to gain some knowledge about the cultural patterns, attitudes toward accomplishments or disappointments in life, attitudes toward marital or social pleasures or disharmonies, and the drives or inadequacies of the parents.⁵ The physician by having some idea about these things can anticipate what will be the attitude of parents toward each other and toward the child. With this information he can shape his professional advice so as to give as little opportunity as possible for the parents to hinder the adjustment of the child by bringing their own personality difficulties and problems into his management. This is the ideal, but unfortunately neither practicable in all cases nor by all physicians.

Some such analysis, however, is essential for successful treatment in any case.⁵ This must be done discreetly. An intelligent parent may be able to make readjustments without further difficulty if the faulty factors in the cultural pattern of his own development, or other possible etiology for his needs and drives, are pointed out to him, and he can be brought to realize the possible causes for his faulty attitude toward the child. However, some individuals need constant attention with an effort toward directing the needs and drives of their maladjustment into other channels away from or less injurious to the child. Unless this is done, more serious difficulties may result because of the inability of the parents, through their very maladjustment, to accept the advice given.^{4, 5}

The attitudes toward the child of the parents and other members of his environment are of paramount importance. The attempts of family physicians or pediatricians to direct satisfaction of the needs and drives of adults away from the child, would be simplified if it were not for the advice which is being promiscuously disseminated by individuals, many of whom are neither quali-

fied nor sincere in their efforts. In fact, if it were not for the strife of pseudoscientific individuals for popular public acclaim through sensational propaganda, and the unreliable "health" advertising of commercial organizations, much of the shifting foundation for over-anxiety about children would be obviated.⁹

The child welfare movement which originated in France in the Nineteenth Century, largely through the efforts of lay organizations because of a fear of depletion of European population, has served its purpose well and has become a sort of Twentieth Century science. It has brought civilization from an attitude of grave censure of race suicide through abortion and negligent infanticide, to one of such enthusiasm about birth control that if an intelligent wife has an accidental pregnancy she suffers from guilt-feelings about being psychologically inferior to her cultural standards. This is only one factor which may contribute to the frequent rejection of children by their parents.¹⁵ This rejection may result in compensatory attitudes of over-anxiety because of feelings of guilt, and cause faulty behavior to develop.

All of the attention which has been focused upon the welfare of the child has had noticeable effect. Standards for normal have been established from statistical data collected from measurements of large groups of unselected children. Standards for physical development, psychological development, hygiene, nutrition and behavior have been erroneously accepted. An attempt has been made to fit a given child at any week of his life into a pigeon hole according to a standard for accomplishments. Pediatrics as a specialty assumed more importance with growth of this movement, and a definite daily, or in some instances hourly, routine for handling and feeding infants and children became inviolate with many physicians.⁹ I have seen eight typewritten pages of specific routine which was outlined by a California pediatrician for a child who was taken to him for a health examination and found to be slightly under the average weight for her age. Fortunately the mother had more common sense psychology than the physician. Realizing that her child was otherwise healthy and well adjusted she selected the advice about rest and spacing of meals, which seemed reasonable, and continued the successful meal-time psychology which she had been following. The mother

foresaw that if this child was forced into following the routine for a specific menu each meal, regardless of whether or not she had an appetite for it, she would eventually revolt at this type of nagging, which had been avoided thus far in her management.

All of this attention to the child has probably resulted in better health and a physique which will permit of the greater intellectual accomplishments demanded in our modern schools. There has been another result which was not anticipated and which is not fully recognized at the present time.^{9, 10} This focus of attention upon the welfare of the child has given new and different opportunities for manifestation of the needs and drives or compensations of maladjusted adults. The parent or other adult responsible for the child has ample outlet for expression of his own maladjustments in anxiety about the development, health and behavior of the child. Although not so bizarre as the hysteria of a few years ago, the symptoms are just as significant and the effect upon the personality of the child is pronounced.

Much is continually being said about the inferiority feelings which develop in an individual as a direct expression of his feelings of incapacity because of a physical abnormality. This may be true in rationalizing adults. I wish to emphasize the effect of the social attitude about so-called physical handicaps, upon the personalities of the possessors. The abnormality in itself is not the greatest handicap. The emotional conflicts which result because of parental or social attitudes regarding these abnormalities are of most importance. A person who is constantly hearing some kind of reference to his abnormality or who is constantly having things done for him which he is capable of doing with some degree of efficiency himself, will either show a quite natural reaction, revolt, or he will take advantage of the situation to get unhealthy recognition because of his physical handicap. Constant attention to a handicap, whether it be in the form of nicknames relating to it, or whether it be in the form of sympathy or special privileges because of it, will usually become a type of nagging in the interpretation and emotional response of the afflicted. Children with speech difficulties may withdraw because of revolt at being unable to make themselves understood. The cripple may withdraw because of revolt at being unable

to exert his ego in play competition with normal children. The child who has undetected faulty vision or color blindness, or the child who unknowingly does not hear well may withdraw because his sincere attempts in his best possible accomplishments are looked upon by the teacher or parents as lack of effort. The other most common reactions in such cases are regression, or temper tantrums and fighting.

A child has an ability for interpretation of the attitudes of members of his environment. This is very keen in infancy; the baby gurgles, cries or screams in response to it for the purpose of self preservation. This sense is gradually dulled as our emotional experiences become more complex throughout childhood and adolescence. This dulling saves us much grief from knowing the reactions of every member of society toward us. It is, however, less dulled in some individuals than in others. Because of this more keen intuitive sense the child is likely to unconsciously understand attitudes toward him which the parent is unaware of possessing.

The approach to analysis and treatment of a behavior problem need be no different from the successful handling of any medical problem. The physical examination and history have comparatively the same value to the physician as they have in the successful diagnosis and treatment of other conditions. From the standpoint of treatment and prognosis, our approach to the analysis of a behavior problem necessitates more interest in the intelligence of the patient and parents and the various aspects of the environment than would be observed in dealing simply with organic disease. Analysis and treatment both begin at the first contact with either the patient or the parents. The physical examination should be complete in every detail. It should be done in good light with all clothes removed and preferably with no other person, except an attendant, in the examining room. It should include a close inspection for physical abnormalities or gross dysfunctions. The common measurements should be taken for present and future check on the development and nutrition of the body. Careful search should be made for foci of infection, evidences of chronic toxemia or signs of glandular dysfunction. The temperature, pulse rate and blood pressure should be taken and evaluated according to the physical findings. A routine examina-

tion to determine the acuity of vision and hearing and the color vision is essential. A determination of whether the child is dominantly right or left handed or right or left footed, and a check on the strength of the two hands with a simple dynamometer should be made, and information obtained regarding home or school training. A careful routine neurological examination including inspection of the fundi should be done. All of the findings must be evaluated in the light of the general appearance and reactions of the child.

A simple psychiatric study may be made during the examination.¹¹ The reactions of the patient to questions about himself, certain parts of his body, sex, his family, school, recreation and ambitions can be obtained. The examiner can get a rough estimate of the intellectual capacity of the patient according to his responses to general questions, and his ability to carry out the instructions given for routine procedures in the physical examination.¹² An opinion should not be ventured, however, without consideration of the effect of emotional conflicts which might be present. His attitudes can later be observed in the presence of the parents. If definite determination of intellectual ability is advisable, it can be arranged for with a psychologist.

The history is of the same importance as that taken for purely organic disease except for two considerations. In dealing with certain types of behavior problems such as habit spasms, headaches, fainting spells, etc., it is more necessary to have definite information about previous symptoms of possible central nervous diseases. The other consideration is that the procedure of history taking permits of a thorough analysis of the emotional trends of the parents and an evaluation of their needs and drives in relation to the patient. This information need be obtained by no other method than that of ordinary successful medical procedure. It is not necessary to ask specific questions for all of the various information desired. Neither is it necessary to state specific advice in treatment. The most effective analysis and treatment is often by unconscious procedure. Under the heading of *chief complaints* the behavior symptoms complained of may be obtained along with the physical complaints. The development of these complaints may be reviewed under *present illness* according to the recollection of the parents. Behavior

symptoms are often associated with physical symptoms and a combined story of their development is convenient for interpretation. Information about *past illnesses* will not only give possible clues to some physical finding, but inquiry may bring out the emotional reactions of the patient, the parents or others about these illnesses, and will aid in formation of an opinion regarding the maladjustments of these individuals. The *birth history* is very important. Information about the conception and pregnancies as regards the existence of significant diseases in the parents may also show the marital adjustment of the parents⁵ and their attitudes toward the birth. This will not necessarily signify the acceptance or rejection of the patient. The information may suggest factors in the cultural patterns and attitudes of the parents which are being expressed in their management of the child with undesirable effect upon his personality. A careful analysis of abnormal symptoms in the mother during pregnancy and a detailed account of the labor, birth and condition of the baby when delivered, are of additional importance in determination of the primary physical endowments of the patient at birth. Information about the development, management and training during infancy and early childhood will give a clearer picture of the parents and permit of a better analysis of the mechanisms of their behavior toward the child. The *family history* should not only be directed toward obtaining evidence about existing familial or hereditary traits, but should contain such information about various life experiences of the parents as appears to be necessary to determine their needs and drives which have resulted in the behavior of the patient. It must be kept in mind that personality material obtained in this way may be colored by the trends in the persons giving it and must be interpreted in the light of what is known about them.

A temporary plan of procedure for further analysis and treatment may be formulated after a provisional opinion is gained from the facts regarding the physical, psychological and emotional material at hand. Additional procedures indicated by the physical findings may be carried out. Special tests for color vision and handedness or special investigations or training in reading ability may be arranged for. Attention to physical factors with some suggestion as to the management may be sufficient to facili-

tate an adequate readjustment. On the other hand, the parents may be so conflicted or protective and their emotional trends so deep-seated that the necessary analysis or treatment may not be possible by simple methods. It may be necessary to enlist the services of one especially trained in the technic of handling such cases in order to effect a satisfactory readjustment.

Family relationships are important in handling any medical case in practice. They are of paramount importance in the etiology and treatment of child behavior problems.^{4, 5} Successful treatment may be conducted upon a purely superficial level in some cases. Every case is individual, however, and deserves the individual analysis accorded other illnesses. The scientific and most successful handling of these cases includes an attempt to get at the underlying causes for the symptoms in the beginning. With a knowledge of the important cause-and-effect relationships in human behavior and an analytical interpretation of significant trends appearing, the family physician or pediatrician may be able to effect a very successful prophylaxis through his usual periodic contacts with the family. Developing behavior problems can usually be handled very simply in their incipency by giving the parents some insight into the causative factors of their development. Complex problems which are usually manifested by multiple symptoms of behavior, should be approached with the caution which characterizes the prudent procedure in handling any complex medical problem. They are the result of a certain pattern of conditioning throughout the life of the patient and may be varied and complex. It should not be expected that a complete analysis can be made in one or two brief interviews any more than a complete diagnosis and prognosis can be given from a similar amount of study in a case of tuberculosis, cardiovascular-renal disease, hyperthyroidism or diabetes. In fact, it may be necessary to rule out an acute or chronic disease condition as etiology for the behavior symptoms. The completion of the necessary physical examination, history and laboratory studies may give reason for several contacts with the family and the patient. During this time a temporary or initial procedure for medical management will have been instituted depending upon the indication of the physical findings. Such a procedure will permit of a deeper analysis of all

of the cause-and-effect relationships, with progress being made from the first contact. If the parental maladjustments are too complex and deep-seated to be handled by the general methods of the pediatrician or general practitioner, the case should be referred to a competent consultant psychiatrist or clinic.

Because of the "controversial and inconclusive status" of the psychiatric and mental hygiene literature, most of which is couched in hazy, newly-manufactured terminology, it has maintained an atmosphere of mysticism, and its exponents have labored under the ban of cultism. Because of this complex, hazy terminology, which is probably to some degree compensation for insecurity from lack of scientific basis for some of its highly theoretical philosophies, most physicians have stood in awe of it, feeling inadequate to master something scientifically beyond their sphere. They have not realized that its very controversial and complex nature is evidence of some lack of scientific foundation in fact. They have not realized that an understanding of the human personality, which is the object of the mental hygiene and psychiatric literature, is the keystone of successful medical practice.

A more scientific analytical understanding by physicians of the mechanisms of personality development is a step forward in medical progress. It is a means to simplification of the art of medical practice. A summary of the psychological and psycho-analytic theories of Sigmund Freud, Alfred Adler and C. G. Jung is given by Dr. Beatrice M. Hinkle³ in her introduction to "The Recreating of the Individual." J. C. Flügel⁶ vividly presents the psycho-analytic interpretations of various family relationships. Porter R. Lee and Dr. Marion Kenworthy⁵ emphasize the importance of "cause-and-effect relationships" in analysis and treatment of behavior problems, and give striking illustrations of their significance. These relationships are more specifically shown by detailed analysis and interpretation of selected case histories by Maud E. Watson.¹³ More or less superficial considerations of the development of behavior symptoms and the management of children may be found in the various books on child guidance and behavior problems in children.

As physicians we are interested primarily in the welfare of our patient as a whole. This implies a consideration of his personal-

ity adjustments and mental health as well as his physical well-being. Those of us who confine our practice to infants and children know the variety of complaints of parents about their children and the physical abnormalities in our patients which have their origin in faulty parent-child relationships. We also know the difficulties which we meet in trying to cope with them. The approach to their better understanding lies in an attempt to discover the maladjustments of the adults who are in faulty relation with the child.

In conclusion to the consideration of behavior problems in everyday practice, no better remarks could be used than those of Dr. Borden S. Veeder:¹⁴

"The pediatrician and the general practitioner have been slow to widen their field, to look on the child as a whole, to recognize that normal development implies the mental as well as the physical, and to recognize that personality difficulties may make an individual as much of an invalid as physical illness. . . . The only person I know who comes into close contact with young children and has the opportunity of seeing and foreseeing the concrete individual problem is the pediatrician and general practitioner. I cannot see any other way out than for him to take on the added function of forestalling abnormal mental development and habits in the same way that he tries to prevent faulty physical development. This implies, of course, a knowledge of the essentials in this field."

3743 BRUSH STREET.

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INTESTINAL OBSTRUCTION
A REVIEW OF NINETY-FIVE CASES

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Voluminous literature related to the various phases of the problem of intestinal obstruction exists. The condition has been studied by many observers from many angles. Certain factors have been established and are recognized. A high mortality prevails. The quest of surgeon and internist is to reduce this mortality. Reviewing the records of a hospital and profiting by the findings will aid in the attainment of this end.

The material for the present study was taken from the files of the History Library of Butterworth Hospital, Grand Rapids, Michigan. It includes 95 cases of intestinal obstruction that occurred during the five year period from 1926 to 1930. These were cases with a definite diagnosis of intestinal obstruction during this period.

These have been studied as to: (1) age incidence, (2) sex incidence, (3) type, (4) result, (5) cause of obstruction, (6) number of operators, (7) symptom duration, (8) type of operative procedure. Because of the large incidence of adhesions as a cause of obstruction this series of cases was more minutely considered.

Age incidence. The age incidence of the 95 cases reported may be summarized as follows:

Age in years	No. of cases
0-5	7
6-10	1
11-20	6
21-30	17
31-40	19
41-50	11
51-60	15
61-70	15
71-80	4

The ages from 21 to 40 years and from 51 to 70 years present the greatest incidence.

Sex incidence. There were 53 female and 42 male patients in this series.

Type. Dividing the cases of this series into partial and complete obstructions we tabulate 42 partial and 53 complete obstructions.

Result. Of the 95 cases reported 45 died in the hospital and 50 recovered, a mortality of 46.2 per cent. The mortality for the cases of partial obstruction was 31 per cent and for the cases of complete obstruction was 60.4 per cent.

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Cause of obstruction. The immediate causes of obstruction have been summarized and recovery and death noted as follows:

Cause	No. Cases	Recovered	Died
Adhesions	56	35	21
Carcinoma	9	6	3
Hernia	7	2	5
Intussusception	7	4	3
Paralytic Ileus	5	0	5
Volvulus	4	1	3
Gallstones	2	0	2
Enterolith	1	1	0
Endometriosis	1	0	1
Congenital atresia	1	0	1
Undiagnosed	2	1	1

Adhesions in the abdomen was the cause of obstruction in 59 per cent of the cases. The fact that post-operative adhesions were responsible in a majority of the cases has prompted a closer examination. The summary appears later in the course of this article.

Number of operators. Of the 95 cases reported 93 were operated upon. There were 28 operators into whose hands the 93 cases came. Findings in regard to the number of cases operated by each and the respective mortalities of these operators are summarized in the following:

Operators	Cases operated	Recovered	Died
1	15	8	7
1	9	8	1
1	9	5	4
1	7	2	5
1	6	2	4
5	4 each	11	9
2	3 each	2	4
5	2 each	6	4
11	1 each	6	5

Symptom duration. It is open to question how exact information obtained from routine case histories in regard to symptom duration may be. However the data on pre-operative duration of symptoms are summarized as follows:

TABULATION OF CASES

No.	Sex	Age	Type	Cause	Duration	Findings	Treatment	Result
1	M	48	P	Carcinoma	3 wk.	Ca. occluding sigmoid	Resection and anastomosis	Rec.
2	F	63	C	Adhesions	24 hr.	Adhesions on small bowel	Intubation two loops	Died
3	M	55	P	Adhesions	4 mo.	Adhesions splenic flexure	Adhesions broken. Tubed	Died
4	F	28	C	Adhesions	72 hr.	Adhesions ileocecal junction	Ileostomy	Died
5	F	40	C	Adhesions	12 hr.	Adhesions of ileum	Adhesions broken	Rec.
6	F	68	P	Hernia	4 yr.	Direct ventral hernia	Herniorrhaphy	Rec.
7	F	48	P	Carcinoma	3 wk.	Ca. lower sigmoid	Colostomy	Rec.
8	F	55	P	Adhesions	72 hr.	Adhesions of ileum	Adhesions broken	Rec.
9	M	61	C	Volvulus	4 da.	Volvulus of ileum	Reduction—resection	Rec.
10	F	69	C	Adhesions	48 hr.	Adhesions doubled bowel	Adhesions broken	Died
11	M	62	C	Volvulus	4 da.	Volvulus of sigmoid	Reduced	Died
12	F	35	C	Adhesions	4 da.	Adhesions of small bowel	Adhesions broken	Died
13	M	68	P	Adhesions	15 da.	Adhesions of sigmoid	Adhesions broken	Rec.
14	M	59	C	Volvulus	4 da.	Volvulus ileo-cecal jct.	Not completed	Died
15	F	26	C	Adhesions	48 hr.	Adhesions of ileum	Torsion reduced	Died
16	F	11	C	Adhesions	12 hr.	Adhesions to ileum	Adhesions broken. Tubed	Died
17	F	1 1/6	C	Intussusception	24 hr.	Intussusception jejunum	Intussusception reduced	Died
18	F	30	C	Adhesions	48 hr.	Pocket of adhesions	Resection and anastomosis	Rec.
19	F	7/12	C	Intussusception	9 hr.	Intussusception cecum	Intussusception reduced	Died
20	M	74	C	Gallstone	48 hr.	Gallstone in ileum	Gallstone removed	Died
21	M	39	C	Paralytic ileus	5 da.	Appendicitis & ileus	Appendectomy and ileostomy	Died
22	F	8/12	C	Intussusception	30 hr.	Intussusception, jejunum	Reduced	Died
23	F	3/12	C	Intussusception	12 hr.	Intussusception, ileo-cecal junction	Intussusception reduced	Rec.
24	M	29	C	Adhesions	20 hr.	Band constricting colon	Bands broken	Rec.
25	F	29	C	Adhesions	48 hr.	Omental adhesion to bowel	Bands broken. Resec. and ana.	Rec.
26	M	11	P	Adhesions	4 da.	Adhesions to ileum	Adhesions broken. Tubed	Rec.
27	F	51	P	Unknown	7 da.	Perforation sigmoid & Ob.	Colostomy in sigmoid	Rec.
28	F	23	C	Adhesions	72 hr.	Adhesions kinked ileum	(1) Adh. broken (2) Tubed	Died
29	F	34	P	Adhesions	48 hr.	Adhesions to ileum	Adhesions broken	Rec.
30	F	62	C	Enterolith	48 hr.	Enterolith in sigmoid	Enterolith passed down	Rec.
31	F	51	P	Adhesions	36 hr.	Adhesions to ileum	Adhesions broken	Rec.
32	M	22	C	Adhesions	24 hr.	Adhesions to ileum	Adhesions broken	Rec.
33	F	54	P	Adhesions	4 mo.	Adhesions to colon	Adhesions broken	Rec.
34	F	29	C	Adhesions	72 hr.	Adhesions ileum to cecum	Adhesions broken. Tubed	Rec.
35	M	24	C	Adhesions	6 da.	Adhesions bowel to wall	Adhesions broken. Tubed	Died
36	M	31	C	Adhesions	21 hr.	Adhesions ileum to old incision	Adhesions broken. Tubed	Rec.
37	M	19	C	Intussusception	33 hr.	Intussusception at cecum	Intussusception reduced	Rec.
38	M	52	C	Adhesions	4 da.	Adhesions & torsion ileum	Reduction. Sigmoid tubed	Rec.
39	M	36	P	Adhesions	2 mo.	Adhesions omentum to cecum	Adhesions broken	Rec.
40	M	35	C	Adhesions	6 da.	Adhesions to incision	Adhesions broken. Tubed	Rec.
41	F	23	C	Adhesions	48 hr.	Ulcer adhesion to ileum	Adhesions broken. Tubed	Died
42	F	60	C	Hernia	4 da.	Bowel through omental hole	Omentum severed	Died
43	F	20	P	Adhesions	2 wk.	Adhesion bowel to incision	Adhesions broken	Rec.
44	M	54	C	Paralytic ileus	4 hr.	Perforation ileum & ileus	Rupture sutured. Tubed	Died
45	F	40	C	Carcinoma	72 hr.	Ca. descending colon	5 operations	Died
46	F	42	P	Adhesions	36 hr.	Adhesion omentum to cecum	Adhesions broken	Rec.
47	F	37	P	Volvulus	3 wk.	Volvulus of ileum	Reduced and tubed	Died
48	F	20	P	Hernia	4 da.	Ileum in less omental cav.	Hernia reduced. Tubed	Rec.

TABULATION OF CASES—CONTINUED

No.	Sex	Age	Type	Cause	Duration	Findings	Treatment	Result
49	M	39	C	Hernia	36 hr.	Diverticulum knot ileum	(Post-mortem)	Died
50	M	42	P	Undiagnosed	48 hr.	Volvulus? Ileus?	Jejunostomy	Died
51	M	31	C	Adhesions	4 hr.	Adhesion omentum to ileum	3 operations. Tubed	Rec.
52	F	45	P	Adhesions	11 da.	Adhesion duodenum—old ulcer	Post. gastro-enterostomy	Rec.
53	M	69	P	Carcinoma	3 wk.	Ca. descending colon \bar{c} adh.	Adhesions broken. Tubed	Died
54	M	58	P	Carcinoma	?	Ca. cecum	Glass tube enterostomy	Died
55	F	75	P	Hernia	7 da.	Ca. umbilical hernia	Hernia reduced	Died
56	F	6/12	C	Intussusception	8 hr.	Intus. 14" ileum in colon	Reduced. Appendectomy	Rec.
57	F	28	P	Adhesions	48 hr.	Adhesion band over ileum	Adhesions broken	Rec.
58	M	47	C	Par. Ileus	5 da.	Cholecystectomy 5 da. before	No operation	Died
59	F	38	P	Adhesions	9 da.	Adhesion gut to lap. scar	Adhesions broken	Rec.
60	F	36	P	Adhesions	34 da.	Adhesions of TB peritonitis	Adhesions broken	Died
61	M	35	P	Adhesions	18 yr.	Adhesions transverse colon	Adhesions broken. Om. graft	Rec.
62	F	69	P	Carcinoma	72 hr.	Ca. sigmoid colon	Lateral anastomosis	Rec.
63	M	7	C	Intussus.	24 hr.	Intus. ileum into cecum	Reduction and appendectomy	Rec.
64	F	42	C	Par. Ileus	48 hr.	Paralysis jejunum—post-op.	Wetzel tubes in jejunum	Died
65	F	49	P	Adhesions	48 hr.	Adhesions gut to gut	Adhesions broken. Tubed	Rec.
66	F	24	P	Adhesions	18 da.	Adh. ileum to ileum and scar	Adhesions broken. Tubed	Died
67	F	68	C	Adhesions	24 hr.	Adh. ileo-cecal region	Adhesions broken	Rec.
68	M	71	P	Adhesions	6 da.	Adh. band to ileum C ulcer	Adhesions broken. Tubed (2)	Died
69	M	64	P	Carcinoma	1 yr.	Ca. of sigmoid	Colostomy	Rec.
70	M	44	C	Adhesions	10 hr.	Adhesion of ileum \bar{c} torsion	Adhesions broken	Died
71	M	21	C	Adhesions	3 da.	Adhesion of ileum \bar{c} torsion	Adhesions broken	Died
72	M	52	C	Par. Ileus	24 hr.	Appendiceal abscess drained	No operation	Died
73	F	72	P	Carcinoma	5 mo.	Omental Ca. obstructing colon	Omentum resected. Adh. bk.	Rec.
74	F	39	P	Adhesions	8 mo.	Adhesion of ileum \bar{c} torsion	Adhesions broken	Rec.
75	M	55	P	Carcinoma	4 da.	Ca splenic flexure of colon	Colostomy	Rec.
76	M	43	P	Adhesions	18 mo.	Adhesions ileum to ileum	Adhesions broken. Om. graft	Rec.
77	F	21	P	Adhesions	5 da.	Adhesions \bar{c} torsion	Adhesions broken	Rec.
78	M	65	P	Adhesions	24 hr.	Adhesions to ascending colon	Adhesions broken	Died
79	M	5	C	Adhesions	72 hr.	Rupt. app. adhesions ileum	Drainage and ileostomy	Died
80	M	30	C	Adhesions	48 hr.	Adhesions to cecum	Bowel intubated	Rec.
81	F	56	C	Hernia	72 hr.	Fem. hernia \bar{c} strang. ileum	Hernia reduced. Resection	Died
82	F	31	C	Adhesions	48 hr.	Adhesions to ileum \bar{c} torsion	Adhesions broken. Tubed	Died
83	M	21	C	Adhesions	27 hr.	Adhesions to gut	Adhesions broken	Rec.
84	F	51	P	Hernia	12 da.	Ventral hernia C ileum, colon	Hernia repaired	Died
85	F	27	P	Adhesions	5 da.	Adhesions to hepatic flex. colon	Adhesions broken	Rec.
86	F	2 wk.	C	Cong. atresia	2 wk.	Atresia of duodenum	Operation not completed	Died
87	M	32	P	Adhesions	10 yr.	Adhesions to transverse colon	Adhesions broken. Om. graft	Rec.
88	F	68	C	Gallstone	5 da.	Gallstone in jejunum	Stone removed	Died
89	F	51	C	Adhesions	5 da.	Extensive adhesions	2 op. Tubed. Adhesions br.	Died
90	F	31	C	Adhesions	24 hr.	Adhesions to ileum \bar{c} torsion	Adhesions broken	Rec.
91	F	48	P	Endometriosis	7 wk.	Endometriosis of gut	Resection and anastomosis	Died
92	M	68	C	Adhesions	26 hr.	Adhesion to ileum \bar{c} torsion	Adhesions broken	Died
93	M	66	P	Adhesions	18 hr.	Adhesion to cecum	Adhesions broken	Died
94	M	32	P	Adhesions	1 mo.	Adhesion to gut and colon	Adhesions broken	Rec.
95	M	16	C	Adhesions	48 hr.	Adhesion to ileum \bar{c} torsion	Resection and anastomosis	Rec.

Pre-operative Symptom duration	No. cases	Recovered	Died
1-12 hours	8	4	4
13-24 hours	15	8	7
25-48 hours	17	9	8
49-72 hours	8	3	5
4- 7 days	18	8	10
8-14 days	6	5	1
15-21 days	4	2	2
Longer	16	11	5
Unknown	1	---	1

This summary includes all partial and complete obstructions operated upon. Because of the widely varied pathology encountered it does not show any advantage of early operation. That this is not a true relationship may be shown if only cases of complete intestinal obstruction are considered. Taking this type of case it was found that the average pre-operative symptom duration in those that recovered was 48 hours, and in those that died was 61.5 hours.

Type of operative procedure. Due to the large number of operators and the variety of pathology encountered it was difficult to classify operative procedures for the entire series. There were several groups of four or more cases in which procedures were similar enough to be grouped. These cases are reported as follows:

	Cases	Recov- ered	Died
Adhesions severed only.....	31	24	7
Adhesions severed, bowel intubated	17	6	11
Bowel intubated only.....	8	2	6
Resection and anastomosis.....	8	6	2
Volvulus or intussusception reduced	8	4	4
Colostomy	4	4	0

Adhesions and Intestinal Obstruction. The series of cases in which intestinal adhesions were a direct cause of intestinal obstruction was reviewed more carefully. There were 56 cases of this type, an incidence of 59 per cent. There were 28 partial and 28 complete obstructions. Of these patients 35 recovered and 21 died, a mortality of 37.5 per cent. The previous surgical history of these patients is summarized as follows:

<i>No previous surgical operation—19</i>	
Typhoid fever	1
Gunshot wounds of abdomen.....	2
No operations	16
<i>Previous operations—37</i>	
Appendectomy	22
Cholecystectomy	4
Ectopic pregnancy	4
Ovarian cyst removed	1
Pyo-salpingectomy	1
Not stated	5

Of interest was the observation that in nine instances obstruction was caused by adhesions to the scar of a previous operation and in five other cases there were adhesions to the anterior abdominal wall. In eight of the nine cases mentioned records of the previous surgery could be traced. In six of the eight cases there had been drainage and in three of these there was severe inflammation due to a ruptured appendix, while in three others a mild inflammatory reaction had been present. In three of the cases acute inflammation and drainage may have caused the adhesions to the operative scar, but in five cases less blame may be attached to these factors and some error in operative technic be suggested as the cause.

DEDUCTIONS

1. Early recognition and prompt operative interference is of primal importance in maintaining a low mortality rate.
2. In this series the outstanding etiological factor was post-operative adhesions. It is of vital importance that in every laparotomy great care be exercised in securing the peritonization of all denuded peritoneal surfaces. Secondly, in suturing the abdominal peritoneum it is imperative to place the sutures so that incised peritoneal edges are everted. The exercising of greater care in closing the abdominal incision will be a material factor in lessening intestinal obstruction following operation.

CONVALESCENT SERUM*

ITS USE IN THE TREATMENT OF ACUTE COMMUNICABLE DISEASES

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Convalescent serum is a therapeutic measure which has been known for many years but has not been used universally because of the difficulty in obtaining donors and preparing the serum for use. It will be my purpose this evening to outline a method of obtaining large amounts of serum and the manner in which it may be used.

The Detroit Department of Health during the measles epidemic of 1927 decided to increase the supply of convalescent serum, which they had maintained for hospital use since 1924, sufficient so as to make it available for general distribution. Previous to this time they had relied upon donors who were convalescing from the disease in the hospital as a source of supply. The serum clinic was organized to collect blood from cases of measles in the convalescent and post-convalescent stages. The following routine was adopted.

Every known case of measles which had occurred within one year received a circular letter advising them that the Health Department was prepared to pay ten dollars for a small amount of blood. If they were willing to furnish blood, to communicate by either telephone, mail or a personal visit with the nurse who had charge of making the appointments. A complete history covering both communicable and social diseases was obtained at their first visit. If their general physical condition was satisfactory, from two hundred to five hundred cubic centimeters of blood was withdrawn from one of the veins of the arm into sterile centrifuge flasks. In withdrawing blood it was found a blood pressure cuff and forty millimeters of pressure would maintain a steady flow of blood, provided a clean sixteen gauge needle was introduced completely into the lumen of the vein. As soon as the blood was withdrawn it was chilled to hasten coagulation and then allowed to stand in the icebox for twenty-four hours to bring about contraction of the clot and separation of the serum. The flasks were then centrifuged to complete the separation and the serum pipetted off. Serum from five to seven donors was mixed after the Kahn test was found to be negative. A half of one per cent of phenol was added and the serum tested for sterility. Bacteriological examination prov-

ing it to be sterile, the serum was then bottled in suitable containers. Each batch of serum was tested for sterility before being released for distribution. If the donor was willing after his first bleeding and his Kahn and Wassermann tests were negative a second appointment was made two weeks later and further appointments at monthly intervals. The withdrawal of two hundred and fifty cubic centimeters of blood from an adult approximately once a month was not found detrimental in any way. In many cases it actually seemed beneficial. None of the donors lost weight or suffered any untoward effects. The majority gained weight and remarked they felt better than previous to their illness. By this method it was possible to obtain enough serum to supply the needs of those physicians who requested measles serum for both prophylactic and therapeutic use. In addition, serum was made available for all the institutions throughout the city that required it. With the success that attended the collection of convalescent measles serum, it was decided to extend the work to include all of the communicable diseases excepting diphtheria and it was possible to maintain a supply of serum adequate to meet the demand for the following diseases: Scarlet fever, measles, chicken pox, whooping cough, mumps and acute anterior poliomyelitis.

This was not the first time convalescent serum had been collected for general distribution. Richardson, of Providence, Rhode Island, in 1924 collected sufficient measles serum to make it available for city-wide distribution but to my knowledge, this is the first time an attempt had been made to supply all of the various serums such as has been done in Detroit. With the success of

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the Detroit Clinic, numerous municipal county and state Health Departments have begun the collection of convalescent sera. In some instances they have limited themselves to the collection of poliomyelitis serum, others have collected such sera as they felt there was a pressing need for.

It is possible in any community to obtain a fairly adequate supply if you explain to people why you wish the serum and its value. The newspapers are always willing to coöperate and the radio is an especially good means of reaching potential donors.

Turning to the use and value of convalescent sera, what will they do for us that other therapeutic agents will not? Considering scarlet fever, we have a method of determining susceptible individuals by the Dick test. Those found susceptible may be immunized by graduated doses of Dick toxin. A person having been exposed, if seen early enough, may be given scarlet fever antitoxin and prevented from contracting the disease. If not seen until the onset of scarlet fever, a therapeutic dose of antitoxin may lessen the severity of the toxemia. Scarlet fever antitoxin apparently has little effect so far as complications are concerned. There are several outstanding objections to the use of these preparations in so far as the laity is concerned. First, the reactions associated with the active immunization against scarlet fever have been so severe that the public has not accepted this means of protection to any large degree. Passive immunization of contacts by the use of Dick scarlet fever antitoxin is frequently associated with serum sickness, particularly because of the wide spread immunization against diphtheria by toxin-antitoxin. The occasional development of an Arthus phenomenon following the use of horse serum and the potential danger of anaphylactic shock following its administration are also to be considered. It is not pleasant to find a contact whom you have attempted to save from contracting scarlet fever, more sick with the reaction that follows the administration of scarlet fever antitoxin than the case of scarlet fever to which he was exposed. It is difficult for parents to understand that while the child is uncomfortable he may have been saved from a severe case of scarlet fever. In all except the severe toxic cases of scarlet fever there is always danger of being more sick from the administration of antitoxin than from

the disease itself. Because of these various reactions which are associated with the use of the laboratory preparations for the treatment of scarlet fever, there is a big field for convalescent serum in the treatment of this disease. In convalescent serum, we have a therapeutic agent which will give all of the good effects that we hope to obtain by the use of Scarlet Fever Antitoxin. Because this serum is prepared from the blood of human beings we are able to assure the patients and parents that they do not become sensitized. We do not have to fear serum reactions, the danger of anaphylaxis and the danger of producing an Arthus phenomenon. Scarlet fever convalescent serum remains the best therapeutic agent available for the prevention and treatment of this disease.

Convalescent serum will protect ninety-five per cent of the contacts if it be given within two days after exposure. This immunity is short lived and expires somewhere between three and six weeks following the administration of the serum. However, if there are repeated exposures, as for example when the child must remain in the same house with the case, it is best to administer a second dose at the end of the third week in order to guard against a loss of immunity. An acutely ill case of scarlet fever of the toxic type will usually respond very quickly to the administration of a therapeutic dose, that is, thirty to sixty cubic centimeters of convalescent serum.

Measles.—Considering measles, here again convalescent serum is of great benefit. In this disease, which has a long incubation period, prophylactic use of convalescent serum may be divided into three stages: First, its administration during the first five days following exposure. If administered in doses of seven and one-half to ten cubic centimeters during this period it practically always give complete protection. Serum given in doses of seven and one-half to ten cubic centimeters during the period from five days following the exposure up to the onset of the prodromal stage attenuates the attack of measles and the only symptoms by which we may know that the child is having measles may be a transitory rise in temperature lasting a day or two at the most and the appearance of a few scattered macules over the body. If serum be administered after the onset of the prodromal stage when the child is coughing, sneezing, his tempera-

ture is high and he presents the other clinical signs of photophobia, nasal discharge, Koplik spots and so forth, doses of twenty to sixty cubic centimeters will produce a marked alleviation of symptoms. The temperature will fall, the rash will appear and disappear rapidly, the duration of illness is shortened and its severity markedly lessened. If one is not fortunate enough to see a case of measles until after the eruption has appeared, he must then pick his cases unless he has a very large supply of serum and be governed by conditions in the administration of it. If the patient be a husky, well nourished child over five years of age, who is not severely ill, serum is not essential. If the child is under five years of age, or one who for some reason was not in good health previous to his present illness, such as for example, a child with a hilus tuberculosis, or chronic sinus disease, then large doses, thirty to sixty cubic centimeters of convalescent serum, will lessen the severity and shorten the duration of the attack. Thus, it is possible to offer either complete protection, a partial immunity with an attenuated form of the disease or lessen the severity of the attack. Since measles is responsible for more deaths than diphtheria you will appreciate how valuable convalescent serum becomes in its treatment.

Whooping Cough.—Considering whooping cough, serum from adults who have recently had this disease is at times rather difficult to obtain and its use must be restricted to those individuals who need it most. Convalescent whooping cough serum in doses of seven and one-half cubic centimeters will protect the average child under a year of age, if administered within five days after exposure. Because of the great difficulty which surrounds the diagnosis of whooping cough, it is not always possible to know when exposure has occurred and it frequently happens that infants are not seen until they are in the primary stage of the disease. At this time if larger doses are given the patient can frequently be carried through with comparatively few paroxysms and the duration of the disease shortened. In children over a year of age, who have an underlying constitutional disease such as tuberculosis or chronic sinus disease, convalescent serum in large doses should be used.

Acute Anterior Poliomyelitis.—In this

disease there are certain points that remain unsolved. Of these the most important are: first, the exact way or ways of transmission; second, the positive diagnosis of the disease before the moment of invasion of the central nervous system; and, third, a satisfactory method of protective immunization. Since the exact way in which this disease is transmitted is unknown, it is rather difficult to determine when a child has been exposed and consequently protective immunization is difficult to carry out. Efforts in this disease at present must be directed towards a diagnosis during the pre-paralytic stage and the use of convalescent serum at this time to prevent the development of paralyses. If the case be seen before any signs of meningeal irritation are present, large doses of serum intravenously may prevent any involvement of the brain and the spinal cord. Should the case not be seen until the onset of meningeal irritation but before paralysis has developed, intra-spinal serum will frequently prevent any paralysis. If a case is seen shortly after the onset of paralysis, it is still justifiable to use intra-spinal therapy because the reaction in the spinal cord and brain is inflammatory in type and the residual paralysis is dependent upon the amount of actual destruction of nerve tissue which results. It may be that serum administered early after the development of paralysis will aid in reducing the inflammation and lessen the amount of nerve destruction. If a case is not seen until late, that is three or four days after the onset of paralysis, it is probably useless to administer serum.

Chicken Pox.—The greatest value of chicken pox convalescent serum is where there are large groups of children such as are found in a hospital ward, nursery home or place of that type. Chicken pox serum collected from donors who have had the disease within a comparatively short time, that is, within three to six months, if administered within five days following exposure will stop an epidemic of this type. Its use as a therapeutic measure is hardly worth while because of the mildness of the ordinary attack of chicken pox.

Mumps.—Convalescent serum is of value in this disease, first, to control an outbreak such as sometimes occurs in institutions and also to protect a child to whom for some reason an attack at that particular moment would be detrimental. In these cases, mumps

convalescent serum should be administered.

There are three other diseases in which convalescent serum has been used with seemingly excellent results, although the series of cases reported are too small to positively state its exact value.

These are erysipelas, epidemic encephalitis and pneumonia in infants.

In epidemic encephalitis there have been some excellent results reported following the use of convalescent serum, both intravenously and intraspinally, and until such time as there is a more specific form of therapy, this is the best remedy available.

At the Children's Hospital, during the past three years, we collected a series of one hundred and fifty cases of primary bronchial pneumonia in infants under two years of age. Alternate cases with exactly the same treatment both nursing and medical were used, except that the one group received serum and the controls did not. In this series the mortality rate of the treated cases was only one-half as great as for those who did not receive serum, and, judging from this, the serum seems to be of benefit.

In erysipelas, of the new-born particularly, convalescent scarlet fever serum seems to lessen the severity, reduce the mor-

tality and shorten the duration of the disease. This probably is due to the fact that there are group immune bodies produced by the scarlet fever streptococcus which are active against the various streptococci which produce erysipelas.

Convalescent sera are the closest approach to specific therapy against the communicable diseases available at the present time. Their use is becoming more wide spread as the medical profession becomes familiar with the good results they produce. A central depot for their collection and distribution is ideal. Yet, there is no reason why anyone should not avail himself of the benefits to be obtained, since practically all have donors in their practice available if they will but explain to them the good results that may be expected from their blood and draw their attention to the fact that they or their children may require serum against some other disease which they have not already experienced. If it is not possible to separate the blood serum then whole blood may be taken from the donor and administered directly to the patient. In using whole blood one must use twice as much blood as they would serum.

APPENDICITIS*

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The literature abounds with thoughtful articles on appendicitis and all its phases, yet with our increased knowledge of this common surgical affliction, the mortality is on the increase. The Metropolitan Life Insurance Company¹ reports: the mortality in 1911 as 10.9 per cent per 100,000; in 1928 as 13.7 per cent per 100,000. At Detroit, in 1900 the death rate was 11.2 per 100,000, while in 1930 the death rate was 18.6 per 100,000, an average over a thirty-year period in the city of Detroit of a death rate of 15.87 per 100,000, all ages. The Prudential Life Insurance Company of America,² reported by Frederick L. Hoffman, L.I.D., states that in sixty cities of the United States the death rate per 100,000 has increased from 13.3 per cent in 1910 to 17.6 per cent in 1925. U. S. Government reports that 20,000 die annually from appendicitis. The death rate increased

from 11 per cent in 1920 to 14.4 per cent in 1925.

Deaver³ remarked in 1928 that the important factors in the present high mortality are precipitate operation in the presence of peritonitis, and not removing the appendix that has recovered from an acute attack. Dr. Chas. Mayo⁴ in referring to the increasing mortality is of the opinion that it is due to the fact that the younger generation of practitioners, who did not benefit by the ear-

*Read before the surgical staff meeting at Grace Hospital, February, 1932.

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lier period of discussion, have not recognized the seriousness of such infections, and therefore have not made haste to diagnose and to operate early. Too many operations are

position in the female is brought into close relation to the right ovary, and difficulty may be experienced when the ovary or appendix is at fault. The relation of pain to

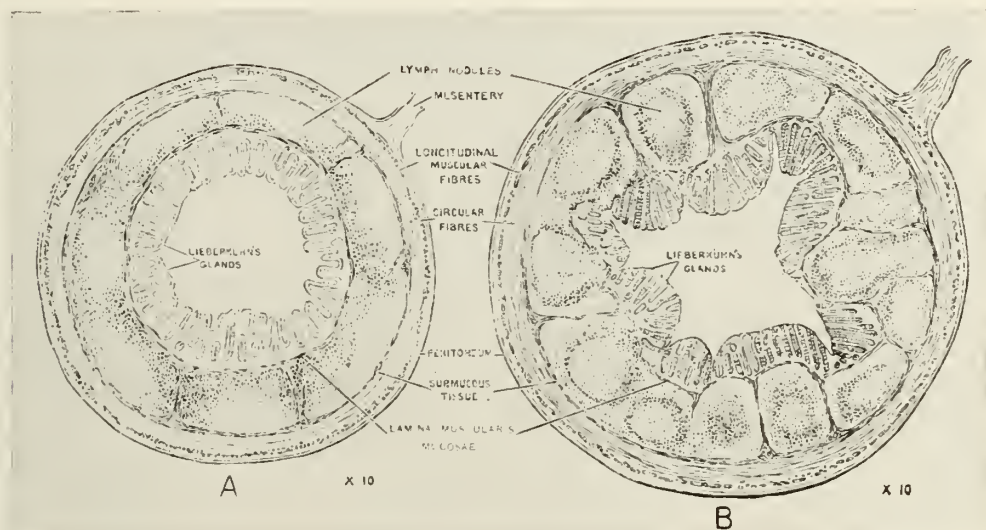


Fig. 1. A, Lumen of child's appendix. B, Lumen of adult appendix. Note larger lumen of child's.

performed during a dangerous intermediate period, not waiting for localization, and too much has been attempted in the late operation where there is abscess. To quote the words of the late J. B. Murphy, "In every death from appendicitis, someone is to blame." Who is this somebody?

With these thoughts in mind I wish to take up in order points which I believe are helpful in diagnosis and treatment rather than the tabulation of cases.

The appendix springs from the posterior medial aspect of the cecum about one inch below the ileocecal valve. This location, lying, as it does, directly under the outlet of the small intestine, probably plays some factor in its frequent pathology. Its position should be constantly in mind, as appendiceal pain depends greatly on its location.⁵

The appendix may point upward and to the left towards the spleen (splenic position); behind the ilium and mesentery.⁶ It may point downwards and to the left (pelvic position) producing so-called "left-sided pain." Inflammatory attacks producing symptoms referable to the bladder or to the rectum, or adhesions to these organs. In such instances micturition and defecation may cause painful symptoms by traction on an adherent vermiform process, and abscess may discharge per rectum or urethra. This

the menstrual period may be of some value.

Again, the appendix may pass forward to the anterior abdominal wall, but can only do so when it has a mesentery. This is known as the "anterior position" and when inflamed the great omentum surrounds it and the mass is easily recognized on palpation. Local tenderness and rigidity are more marked in this position.

In a large percentage of cases it lies lateral to and behind the cecum, or behind the cecum and ascending colon, and points upward. In such cases the pain is at the cecum or high up or in the loin, as the case may be. This position may give symptoms referable to the kidney or bladder. If it has a mesentery, it may lie in the retrocecal fossa. If not, it is adherent to the posterior wall of the cecum by peritoneum and lies in the anterior wall of the fossa.

ANATOMY

The structure of the appendix simulates that of the intestine; having serous, muscular, sub-mucous and mucous layers. The appendix is developed from the tip of the cecum; the fact that all three tenæ coli converge at the base of the appendix is a reminder of its primitive position. The adult position of the appendix is due to the dis-

proportionate growth of the lateral saccule of the cecum, therefore accounting for its medial and posterior position. The appendix does not have a true mesentery, but in

tachment of its mesentery; therefore large gaps are present, through which infection easily spreads to the peritoneum.

The appendix differs from the intestine in that its walls are relatively thick and lumen small. The lymph nodules are closely packed, especially in young people, and occupy the submucosa. As the nature of lymph follicles is to combat infection, nature must have had some reason for so richly endowing the appendix. The lymph follicles are poorly developed at birth, but reach their full development within the first few weeks of extra-uterine life. Obliteration of the lumen is common, but is usually inflammatory in origin, not, as once thought, a change normal in advanced age. The appendix and cecum are richly supplied with the glands of Lieberkuhn and both play a part in digestion.

The nerve supply is from the sympathetic, whose stimuli pass to the semilunar ganglia, thus giving rise to the nausea and vomiting, and epigastric pain—seen in the beginning of an attack. The abdominal pain and muscular rigidity is produced reflexly over the lower intercostals and first lumbar. When the disease affects the serous coat of the appendix—which may be in a few hours—the peritoneum becomes inflamed and this accounts for the local pain and rigidity. In destructive lesions of the wall of the appendix, abdominal pain may disappear in a few hours—this is because the sympathetic nerve endings are destroyed. I think this explanation should clear up the different types of pain mentioned in the literature. It is all a matter of the degree of pathology present and location of the appendix and should not deter one from immediate surgical removal of the appendix. The nerve supply of the peritoneum may be briefly stated as follows: I divide it in two areas: (1) Active and (2) Silent. The active includes the anterior and lateral parietal walls—supplied by the lower intercostals and the first lumbar; when affected either directly or reflexly, pain, tenderness, and muscular rigidity result.

The silent areas are supplied by the sympathetic as the (a) pelvis, (b) the central, and (c) the inferior part of the post-abdominal wall. It must be understood that the term silent is only relative and only intends to suggest that inflammation affecting these parts does not cause such obvious localizing pain or muscular reflexes.

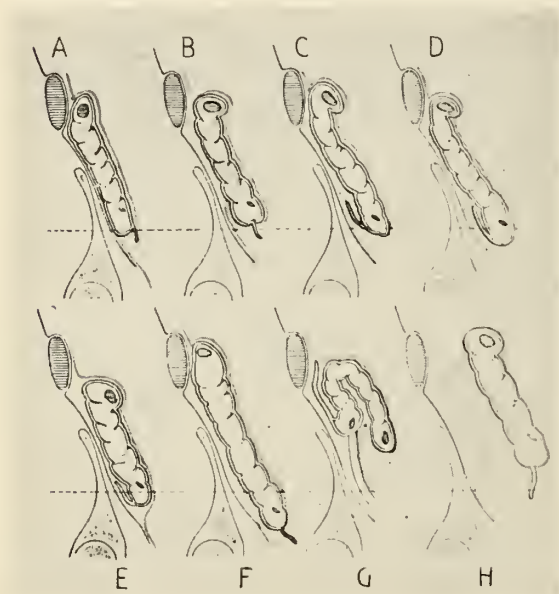


Fig. 2. Diagrams to illustrate the varying relationships of the cecum, the vermiform process and ascending colon to the peritoneum.

A. Absence of cecal fossa, posterior wall of cecum not covered by peritoneum.

B. Normal condition, cecal fossa present.

C. Cecal fossa extending upwards behind ascending colon. Vermiform process retro-cecal in position, but surrounded by peritoneum.

D. Appendix retro-cecal in position, but enclosed by the peritoneum surrounding the cecum.

E. Same as A, but appendix entirely extra-peritoneal.

F. Prolapse of cecum.

G. Undescended cecum. The terminal part of the ileum, as it ascends to the cecum, is retro-peritoneal. The vermiform process is extra-peritoneal except at its tip, which is lying in front of the kidney in the posterior wall of the hepato-renal recess. The ascending colon and the right colic flexure form a "double-barrelled colon."

H. Ascending colon with persisting mesentery, such as is encountered in intussusception.

90 per cent of cases is provided with a falciform fold or meso-appendix of peritoneum, continuous with the lower layer of the mesentery of the ileum. It is triangular and does not extend along the whole length of the tube; in fact it is too short for the appendix, and it is this fact which accounts for the twisted condition of this process, thus accounting for many pathological conditions.⁷

The blood supply is a special branch of the ileocolic artery and crosses behind the terminal portion of the ileum, where pressure may obstruct the circulation, producing stasis and passive congestion. This blood supply is very rich for the size of the organ and passes into the muscular coat at the at-

The clinical application of this can be illustrated thus: 1. A perforated gastric ulcer into the lesser peritoneal sac may give rise to few or no localizing symptoms. Con-

the presence of trypsin. He also digested the mucous membrane of the human appendix and found trypsin, amylase, and invertase, and concluded that the appendix has to

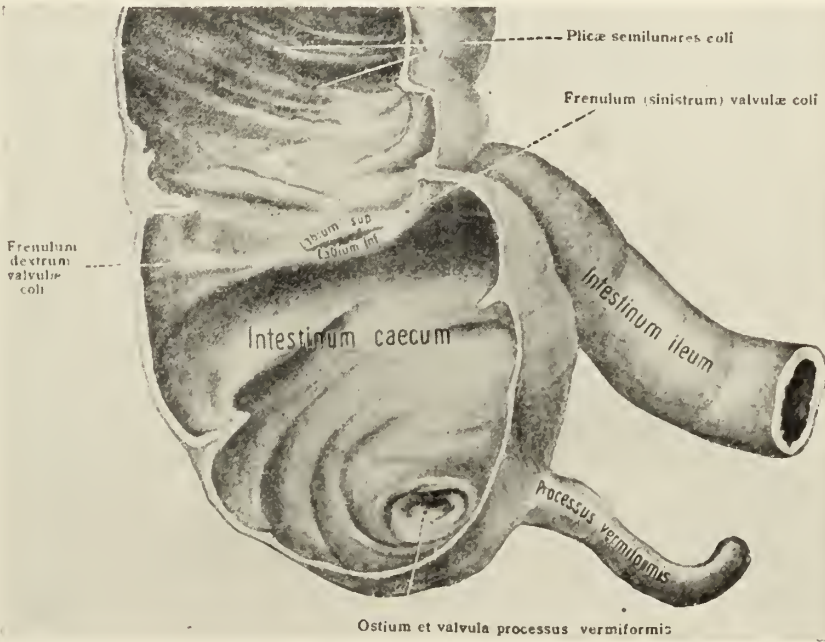


Fig. 3. The relation of the ileocecal orifice to that of the appendix.

trast this with perforation into the greater sac.

2. Again an abscess may develop to considerable size in the pelvis and yet betray little evidence of its presence aside from the general symptoms of fever and toxemia.

3. The appendix that perforates behind the ileum may cause such little disturbance that the condition which causes the patient to seek advice is obstruction of the terminal ileum by the abscess which results.

PHYSIOLOGY

The physiology of the appendix was carefully considered and studied long ago by Sir William MacEwen. He reached his conclusions by a study of cecal secretions obtained through a fistulous opening in the caecum close to the appendiceal opening, and stated that the appendix plays a part in cecal digestion, also that the caecum and appendix play an important part in the final stages of digestion. Heile in 1914, working on dogs, excluded intestinal secretion from the appendix, introduced egg-white and fibrin into the appendix, and found that digestion took place within two or three hours, indicating

do with digestion of food rather than absorption of fluids. Therefore, the physiology of the appendix plays a rôle in the pathology of inflammation of the appendix. We also know that the position of the cecum produces stasis, that it swarms with bacteria, that its reaction is alkaline, and the acid intestinal juice pouring its contents into this produces a reaction, and a possible irritation which predisposes it to bacterial invasion.

The appendix lies one inch below the ileocecal orifice, it receives this flow directly and we believe is one of the factors that may have bearing on a diseased appendix, same as the acid stomach contents being projected onto the duodenal wall is thought to be one of the causes of inflammatory conditions of the duodenum. Disturbed cecal and appendiceal digestion, in the presence of pus organisms, produce sequelæ that have a serious effect on the appendix, resulting in chronic disease.

Accounting for the anatomy, histology, and physiology, we shall now consider the phase of the condition which concerns us most—the diseased appendix—and relate only the more common factors.

ETIOLOGY

Generally distributed; large series show an increase in males over females. Series showing a majority on the female side deal with the chronic cases and often include appendices that have been removed during gynecologic operations. In acute cases the average is 60 per cent males and 40 per cent females. In chronic cases the reverse holds good. The age incidence of appendicitis is principally adolescent and early adult life.⁹ The average age 21.9 years. McCarthy figures a little higher, namely 23.5 years.

SEASONAL INCIDENTS

Appendicitis is found most frequently in the summer season, possibly due to the increased prevalence of gastro-intestinal disorders. A certain percentage of acute cases give a history of recent infection such as tonsillitis, colds, sore-throats, measles, whooping-cough, and acute infectious diseases. Recent infections were most prevalent in young children, and in one series of cases this occurred in 31 per cent. Evans at the University of Wisconsin reports: "Acute appendicitis comes in epidemics and 86 per cent showed demonstrable primary upper respiratory infections." Records show that previous attacks are given as a cause in 50 per cent of the acute cases.

Before discussing the symptoms, I think the pathological picture will be of assistance.

The classification of appendicitis according to Wilkie¹⁰ is simple and to the point. He states, "until we realize that there are two separate and essentially different acute diseases of the appendix—(1) acute inflammation of its walls, and (2) acute obstruction of its lumen, each with its own pathology and clinical picture, we shall continue in greater or less confusion in interpreting the clinical manifestation in different cases."

SYMPTOMS

Acute inflammation of the wall of the appendix is common, and it gives symptoms constitutional in type: malaise, loss of appetite, temperature not very high—101, pulse in proportion, coated tongue, epigastric pain or discomfort, nausea or vomiting, and generally constipation. Rigidity and tenderness, later localizing in right lower quadrant, generally elicited on rebound tenderness or coughing. The milder attacks may come and go without the physician being called,

either for treatment or diagnosis. The scarred stenosed and fibrosed appendices so often found are evidences of such past and possibly forgotten attacks. Progressive inflammation may result, leading to diffuse inflammation of the wall, ending in ulceration, abscess, perforation, or gangrene; however, when early diagnosis is made, prompt operative interference is the wisest course.

Acute appendicular obstruction preceding attack is usually responsible. A stenosis near the proximal end of the appendix interferes with the free egress of fecal matter; some becomes retained and hardened to form a concretion; then at some time without warning the peristaltic action of the appendix drives the concretion into the narrow stenosed area and there impacts it with complete obstruction. Experiments on animals show that upon ligation of the appendix, leaving the blood supply intact, the results depend entirely upon the contents of the appendix at the time of the obstruction. If empty, mucocoele develops. If fecal matter, pus organisms, or foreign bodies become impacted, the appendix becomes distended with pus, empyema results, also perforation, and the animal usually dies in 24 hours. The same condition occurs in man in acute appendicular obstruction. The patient is suddenly seized with cramp-like pain, nausea, vomiting; pain may be in the epigastric region. This subsides and returns with cramp-like character, or in spasms. The attack may start in the night with no rise of temperature or pulse and the appendix well on its way to gangrene before help is summoned. The patient looks ill, and there is always some tenderness and rigidity in the right lower quadrant. Prompt surgical interference is demanded.

A blood count is not necessary, yet helpful, in either case. Leukocytosis generally occurs from 3 to 24 hours after the onset of pain. It is the result of absorption of toxins and not necessarily an evidence of the amount of pathology found. A low count may mean mild infection, a walled-off abscess with cessation of absorption of exudate, or poor body resistance.

Rectal or vaginal examination should always be made. Textbooks and general teaching lay great stress on pain, tenderness, and muscular rigidity as cardinal symptoms. I would say they are over-emphasized. True, they are most all present at some time and

in some degree—and from what has been previously said in regard to the structure of the appendix, it is easily seen how the intensity, character, and duration of these symptoms are altered; by the position of the appendix, its relations, and by the degree of pathology present. For instance, when the anterior and lateral abdominal wall is involved, pain, tenderness, and rigidity are marked. Again, pain may be the first symptom, yet after two or three hours when seen by the physician, the patient may state that the pain is relieved, and on examination little rigidity and only slight pain may be present. However, the appendix may be on its way to gangrene or in a position not in contact with the peritoneum. Delays are dangerous, if we wait for further increase of these signs and symptoms. LaRoque¹³ recently reported 500 cases in which Britain's sign was positive—for gangrenous appendicitis. It may be of value in doubtful cases and is as follows: On light palpation over McBurney's Point, the right testicle is drawn up into the scrotal sac.

TREATMENT

Never use ice bags, morphine nor cathartics. To operate all cases, no matter at what stage they are recognized, is to allow reason to be overruled by prejudice. There is no expectant treatment in acute appendicitis; when diagnosed in its early stages, immediate operation should be carried out; if this is refused and the patient survives, interval operation should be done. The acute appendicular obstruction case with cramp-like pain should be treated as any other case of acute intestinal obstruction and operation done immediately, otherwise perforation into the peritoneal cavity will result. Such an appendix may be well on its way to gangrene in a few hours after the initial attack. Removal through ample incision so that the distended appendix is removed without rupture is the only rational treatment. If the appendix is removed without rupture, even though it be gangrenous no peritoneal drainage is necessary.

As to the other type, acute inflammation of the wall of the appendix, this may last for two or three days or longer; it may subside or go on to ulceration or abscess formation and perforation. Gangrene and perforation, however, do not generally follow so rapidly as in the obstructive type. When operation is performed, no exploration

should be undertaken, because in the presence of infection none should be attempted, and in these early localized cases operative trauma should be reduced to a minimum. Drainage depends upon the character of the exudate.

The fulminating perforated appendix should be operated at once, if seen early. This type goes on from bad to worse and can be likened to an acute perforation of a peptic ulcer. Delays are dangerous. Often the deterring factor against immediate operation is the pronounced muscular rigidity due to the peritoneal irritation and not peritoneal inflammation. It can be likened to muscular rigidity in early perforated ulcer and does not contra-indicate immediate operation.

When a case of appendicitis is not seen or not recognized until the fourth day, the question of operation is a much more difficult one to decide. If there be general distension or if a firm inflammatory mass be felt and no evidence of a considerable collection of pus; if the patient's general condition is good and the pulse below 110, it is wiser to treat on expectant lines with morphia, rest, and proctoclysis. If a localized abscess develops, this may be evacuated. A great many patients who have successfully weathered the peritoneal storm for four days will recover. A meddlesome operation will precipitate a great many of these cases into a critical condition, terminating in death.

As Deaver¹¹ points out, the localized or the circumscribed appendicitis of the acute type with pain, tenderness, and rigidity should be operated early. Where the peritoneal inflammation is extending, where purgatives have been used, the pain becoming more diffuse rather than localized, showing great peritoneal involvement with feeble peristalsis, the expectant treatment should be carried out. However, if these cases are seen early and there is considerable muscular rigidity, they can be successfully operated on in this state, as the cause of the peritonitis may be removed. Otherwise, expectant treatment with proper technic, Fowler's position, saline and glucose solution, morphine, and nothing by mouth is much the better, and operation performed when the peritoneal inflammation has become localized.

The success of this delayed treatment was first mentioned by Ochsner in 1902. Lon-

don hospitals report 3.8 per cent mortality for delayed operations, 6.7 per cent for immediate operations, in these cases. One hesitates to advise delay as it may be misconstrued to mean the adoption of medical treatment. However, the delayed treatment is surgical treatment. Many will respond to this regime but after twenty-four hours under this treatment, if pulse and temperature do not fall and patient complains of increasing pain and distention, operation may be done.

The late cases are the general diffused peritonitis, with general rigidity of the abdominal wall, absence of abdominal breathing, rapid pulse, high temperature, blood picture high, this changing in 24 hours, especially in the ones that have been purged, to that of general abdominal distention, rigidity and tenderness not so decided, entire absence of peristalsis, rapid feeble pulse, peritoneal facies, low leukocyte count but a high poly count, restlessness and active brain. These cases should not be operated.

The abscess cases should be drained without manipulation and told to return in three to four months for removal of appendix.

While the remarkable recuperative powers of the undamaged peritoneum may be trusted to deal with all moderate infections, provided no gross foreign matter is left, it is equally true that where ragged and especially oozing surfaces are laid bare, a drain to the damaged area is logical and helpful surgery. In the early perforated cases or dirty cases, drainage into the pelvis and, if the lateral colic gutter is involved, drainage into Morrison's pouch and up over the liver, between the liver and diaphragm, is indicated, as the amount of peritoneal reflection in this area, if spread out, would cover considerable distance, and it has been shown that subphrenic abscess is less likely to develop. These with a small drain down to the lateral side of the cecum, are the areas to be kept in mind.

POST-OPERATIVE TREATMENT

Simple cases—ordinary post-operative treatment. If the case be one of ruptured appendicitis and peritonitis is present, our effort should be to keep the intestines quiet for the first thirty-six to forty-eight hours. For this reason I believe fluids by mouth or bowel are contraindicated. Fowler's position, morphine in small doses, and saline and glucose intravenously or subcutaneously

are preferable. The passage of gas by bowel is an important diagnostic sign indicating that the peritoneal inflammation is subsiding, and that the intestine is regaining its tone; at this time a small glycerine enema is helpful. The Levine tube passed through the nose into the stomach relieves vomiting, which only stirs up additional peritoneal irritation by retching.¹² The tube is easily passed and does not cause the gagging the ordinary stomach tube does; besides, in cases of high temperature, the patient can be encouraged to drink plenty of cold water and by compressing the tube an internal cold water bag is made of the stomach which is in proximity to the pancreas, liver, and spleen, and with external sponging soon reduces fever. I believe a great many cases of dilated stomach and ileus are prevented by the timely use of the Levine tube. When not so relieved one should not delay in doing a valvular type of enterostomy, in one, two, or more places, if necessary. Time will not permit of differential diagnosis, incisions, etc.

CHRONIC APPENDIX

From what has been said in regard to structure, blood supply and physiology, it is perfectly evident that the appendix is subject to the same disease and upsets that arise in the gastro-intestinal tract in general, or following inflammation from other parts of the body. The degree of the severity of the symptoms may be mild or severe. It is true that a great many of the mild grades clear up without the doctor being consulted, or, if called, he wishes to wait a few hours to see whether the patient gets better or worse. These repeated mild recognized or unrecognized attacks undoubtedly cause changes in the appendix which pave the way for future trouble, that destructive lesions in the appendix are the result of these attacks predisposing the appendix to new infections.

SYMPTOMS OF CHRONIC APPENDIX

1. The only sure diagnosis in most cases is the history and observation of the patient who has had an unquestioned acute attack. Without acute attacks the three principal symptoms are pain, gas, and indigestion. When repeated attacks occur, particularly in young individuals, a presumptive diagnosis of appendicitis is justified. The third picture is that devoid of any typical symptoms

but a sense of oppression in the abdomen. discomfort or ache, rather than actual pain. These pain symptoms are due to structural changes, and are true chronic inflammatory thickening of its several coats; in catarrhal inflammation of the mucous membrane the pain is apt to be of a more steady type. In mechanical lesions the pain is of a more colicky type. Slight pain on deep palpation, constipation, gastro-intestinal symptoms without relation to food are very suspicious of chronic appendix. Time will not permit of differential diagnosis.

Brief mention must be made of appendicitis in children. The mortality in early life is extremely high. Nurslings 70 per cent. Cases under two years—50 per cent. Under six years to fifteen years—40 per cent. Certain anatomical variations help to explain why appendicitis is so serious in childhood.

1. The cecum may not have rotated or descended normally.

2. Appendix itself is much longer, larger, more funnel shaped, contains a larger proportion of lymphoid tissue, and is more delicate in structure.

3. Position is less constant. It may be found under McBurney's Point or anywhere in the abdomen; under the liver, in the pelvis, or well over to the left side. Occasionally it is fixed by a vestigial band or fold.

4. The omentum is delicate, veil-like thickness and offers a feeble barrier to the spread of inflammation. Knowing this anatomical difference, it is easy to understand why appendicitis is much more insidious in onset, the spread of inflammation more rapid, the intoxication more overpowering; it is not difficult to see why the disease is so serious in the very young. Many cases of

indigestion colic, gastritis, gastro-enteritis, acidosis, and many acute infections accompanied by abdominal symptoms, such as pain and vomiting, are in reality instances of unrecognized appendicular disease. Many cases go on to spontaneous recovery, but in every attack of acute abdominal pain, it is a safe rule to assume that the appendix may be involved, and then proceed to verify or rule out the suspicion.

The habit of deciding that such disorders are due to dietary indiscretions and that purgatives will relieve the indigestion colic is responsible for many deaths.

CONCLUSIONS

1. The mortality of appendicitis is on the increase.

2. The anatomy, physiology, and the varied positions of the appendix, with simple classification, are given, and their relation to symptoms stated.

3. A plea is made for the early removal of both acute and chronic types; and proper surgical treatment in the delayed cases is discussed. These factors I believe will greatly help reduce our present mortality.

1504 EATON TOWER

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A SUGGESTED TREATMENT FOR THE DEPRESSION

It is interesting in the period of financial depression that now confronts us to consider some of the extraordinary therapies suggested by various observers. In Germany the suggestion has recently been made that the government devise some plan for officially removing the gold from the teeth of the dead. It has been estimated by a competent German economist and investigator that dental gold worth 11,300,000 marks, or approximately \$3,000,000, was buried with the bodies of 805,973 persons who died in Germany during the year 1929. Most of the gold

used is 21 carat gold. The suggestion is not new, but Hoffmann has worked out a technic for recording installation and for control of extraction of the gold. Approximately 25 per cent of the value of the gold recovered would be applied to the cost of recovering it. It is perhaps difficult to consider this suggestion seriously. Somehow there rings in the ears the famous cry of the prospector, "Thar's gold in them hills!" But it is conceivable that the progress of civilization may lead eventually to effective and economic utilization of many other types of mineral and financial resources now wasted.—*Journal A. M. A.*

BENEFICIAL EFFECT OF N-PROPYL DISULPHIDE IN POLYCYTHEMIA VERA

CASE REPORT

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Sebrell¹ reported the induction of anemia in dogs by the feeding of onions. Gruhitz^{2, 3} subsequently studied the factors in onions producing anemia in dogs and reached the conclusion that the hemocidal substance responsible was present in the oil. Allyl propyl disulphide, the main constituent of onion oil, was not available, hence a series of related compounds possessing the disulphide linkage—S—S—were given to dogs to ascertain their red-blood destroying activity.

N-propyl disulphide was found by Gruhitz to cause destruction of red-blood elements in dogs when given in doses of 0.067 to 0.122 c.c. per kilogram of body weight. No intolerance or untoward phenomena were observed. It was believed, therefore, that this drug might be useful in the treatment of polycythemia vera. The result of prolonged administration in one patient has been attended with some success. Two other patients have been given the drug but failed to coöperate for a sufficient period to permit adequate study.

REPORT OF CASE

Mrs. A. P., married, age forty-eight, complained

analysis, free HCl 2° following alcohol-histamine test meal. Roentgenogram of lungs was negative.

Salient Features of Treatment. The patient was under observation 14 days without any treatment except a diet low in protein. There was considerable fluctuation of red-blood cells and hemoglobin, the erythrocyte range varying between 8.37 million per cu. mm. and 10.2 million per cu. mm. There was a slight change in the hemoglobin; the lowest estimation was 125 per cent (Sahli) and the highest 137 per cent (Sahli). She complained of headache, nervousness and shortness of breath on slight exertion.

The following chronological record shows the scale of dosage of N-propyl disulphide and the changes in the red-blood cells and hemoglobin content during a period of 15 weeks:

	R.B.C. million	Hemoglobin per cent	
Sept. 10, 1931.....	8.75	135	N-p disulphide 0.15 c.c. daily
Sept. 17, 1931.....	8.00	125	Same dosage
Sept. 25, 1931.....	8.10	127	Same dosage
Sept. 29, 1931.....	8.60	137	N-p disulphide 0.3 c.c. daily
Oct. 3, 1931.....	8.00	122	N-p disulphide 0.4 c.c. daily
Oct. 12, 1931.....	7.55	116	Same dosage
Oct. 20, 1931.....	7.00	120	N-p disulphide 0.45 c.c. daily
Oct. 27, 1931.....	6.90	120	Same dosage
Oct. 31, 1931.....	6.85	116	N-p disulphide 0.6 c.c. daily
Nov. 13, 1931.....	7.00	125	N-p disulphide 0.75 c.c. daily
Nov. 20, 1931.....	6.10	112	Same dosage
Dec. 10, 1931.....	5.70	102	Treatment discontinued
Dec. 17, 1931.....	6.10	110	No treatment
Dec. 22, 1931.....	5.60	108	N-p disulphide 0.9 c.c. daily
Dec. 30, 1931.....	4.70	100	Treatment discontinued
Jan. 7, 1932.....	4.70	94	No treatment
Jan. 15, 1932.....	4.85	95	No treatment

of pain in both knees and flushing and tingling in face and hands. Had occasional severe epistaxis. Physical examination showed a florid, dusky complexion, injection of conjunctivæ, engorgement of fundal veins and an enlarged spleen. Laboratory findings: R.B.C. 10.25 million per cu. mm. Hemoglobin (Sahli) 125 per cent. Fragility test within normal limits. Kahn reaction negative. Gastric

Comment.—On the day treatment was started by the oral administration of 0.15 c.c. N-propyl disulphide in olive oil the red-blood cells were 8.75 million per cu. mm. and hemoglobin was 135 per cent. There was not much change in the red-blood elements during 18 days treatment with this dosage of the drug. In succeeding periods the disulphide was increased until an effective hemocidal (?) action was obtained with 0.90 c.c. daily. The erythrocytes were re-

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duced to 4.70 million per cu. mm. and the hemoglobin decreased to 95 per cent (Sahli) by a gradually increasing daily dosage during 15 weeks. The maximal amount of 0.9 c.c. daily was used only during the last week of therapy. Her general physical condition improved appreciably as the red-blood cells and hemoglobin reached the lower levels recorded above.

The drug is excreted by the lungs in a sufficient concentration to give a pronounced odor of onions to the breath continuously. No side-reactions were observed. Whether or not the drug accumulates in the body to

any extent has not been determined. The last mentioned red-blood cell and hemoglobin levels have persisted for two months after withdrawal of the medicament. It is not obvious what physiologic factors operate to account for the sustained hemopoietic depression.

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A CASE OF ALLONAL POISONING

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The use of derivatives of barbituric acid as hypnotics and sedatives is widespread and increasing, and the sale of these drugs subject to no restrictions has resulted in numerous reports of poisoning and of death. The literature contains numerous references to the clinical symptoms accompanying overdosage of varying derivatives, and, although descriptions of postmortem findings are summarized in a few texts, there seems to be little accurate descriptive material available. Claims on the part of manufacturers concerning the toxicity of various derivatives for the most part are meagerly substantiated. Hence, it would appear that postmortem findings in suitable cases should be published until such time as the picture becomes more clearly defined. For this reason the following case is presented:

Early last summer a young woman was found in a room in a local hotel, unconscious, nor could she be aroused by any efforts. Search of her room disclosed the presence of three empty bottles labelled *allonal*. Although there is no possibility of proving the connection between these bottles and the ultimate death of the girl, there is every reason to believe that her symptoms and death were caused by the ingestion of thirty or more tablets. Inasmuch as allonal tablets contain amidopyrine and since the proportion of the two compounds is not stated, it is not possible to ascertain definitely the amount of allonal taken. A conservative estimate, however, would indicate that a minimum of 60 grains was ingested. According to Webster,‡ the average minimal fatal dose of any of these compounds is in the neighborhood of 50 grains, although recovery has been reported from doses exceeding 300 grains. From the standpoint of prognosis in the case under discussion, this point is of interest for it indicates that the patient had a fair chance of recovery. The subsequent events show that such a prognosis would have been warranted.

The patient was taken to the hospital in coma

from which she never emerged, although shortly preceding death she showed definite signs of regaining consciousness. The duration of the coma was six days. She developed clinical signs of pneumonia which autopsy confirmed and her immediate cause of death can be ascribed to bronchopneumonia.

The autopsy protocol was essentially negative except for the following points:

"On opening the stomach and intestines a marked degree of injection is evident. The congestion in the smaller blood vessels is not uniform, although it extends throughout the length of the bowel. The liver is normal in size and weighs 1,360 grams; it is not particularly congested. The kidneys are small, weigh 120 grams each, and show marked hyperemia, especially in the medullary portion. The left lung is collapsed and weighs 380 grams; on section it is normal. The right lung is distended and weighs 730 grams. On section it is congested, pale pink in color and dry. The alveoli cannot be made out."

Microscopical examination shows hyperemia in practically all organs; the lungs, liver and kidneys, however, are of particular interest. In addition to acute passive congestion, the right lung shows, as was expected from the gross examination, a severe bronchopneumonia in the stage of early grey hepatization. The liver fails to show the evidence of advanced passive congestion. Higher magnification (16 mm. objective), however, shows some hyperemia and cloudy swelling. There is definite fatty degeneration and the bile channels are filled with amorphous debris. There is some pigmentation.

The kidneys are of most interest in this case and as will be seen from the low magnification (Fig. 1) there are numerous petechial hemorrhages in the medullary portion. The glomeruli even at this mag-

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nification appear normal. With the 16 mm. objective these hemorrhages are seen in the interstitial tissue and the epithelium of the collecting tubules is apparently unaffected except for some cloudy swelling. Figure 2 shows the cortex of the kidney including a glomerulus which, except for hyperemia and edema, appears normal. A study of the convoluted tubules

The liver may show fatty changes, while the kidneys usually show extensive degeneration of the epithelium of the convoluted tubules with petechial hemorrhages in the pelves." Where Webster obtained these data

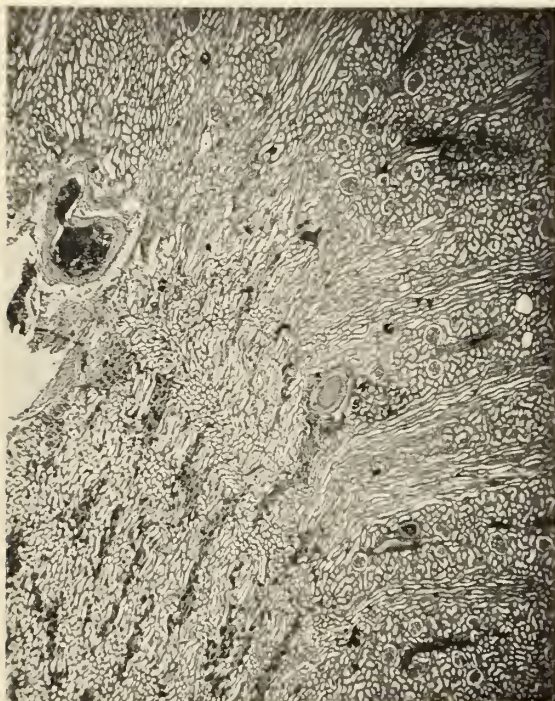


Fig. 1. Kidney, low magnification, showing numerous petechial hemorrhages.

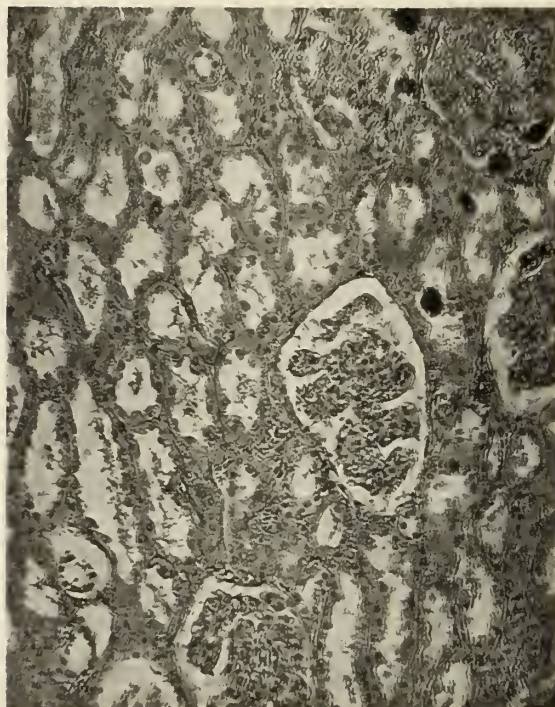


Fig. 2. Cortex of the kidney, normal except for hyperemia and edema.

in this section is surprising in view of what the literature contains as to pathology in cases such as this one. The tubular epithelium, although exhibiting some cloudy swelling, is remarkably well preserved, and there are no casts or collections of blood cells in the lumina. There is some edema and that is all. It could not be said that the damage to any of the organs studied was sufficient to account for the death. Unfortunately, the head was not examined, so that on the basis of what we have, the cause of death was bronchopneumonia, although it should be noted that this patient had undoubted cerebral pathology, especially about the respiratory centers.

In his discussion of the pathology of poisoning with the derivatives of barbituric acid, Webster paints the following picture. To quote:

"The changes found at autopsy are not characteristic. There is a general hyperemia of practically all the internal organs, pulmonary edema, cardiac dilatation, usually a bronchopneumonia and some cerebral edema,

is not apparent from his book, for he gives no references nor have I been able to find in the literature any presentations of autopsy findings in similar cases. In many respects the findings in this case confirm Webster's statements except for the failure to observe significant kidney damage. In view of the fact that this is probably the most serious of the changes described by Webster, the question arises as to whether or not there is some basis for the claims regarding the toxicity of allonal. Since the dosage in this case cannot be accurately determined, nothing can be made of such a claim. It does seem, however, that detailed studies of similar cases, and they will occur with some frequency as the years go by, will do much towards increasing our knowledge of the effects of these drugs.

EFFECT OF EVAPORATED MILK ON THE INCIDENCE OF RICKETS IN INFANTS

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Rickets, though much progress has been made in controlling it, is still a disease of importance. Hess et al¹ estimate that three-fourths of the Negro and at least one-half of the white infants of the poor families attending their health centers in New York City have definite signs of rickets, and observations in Detroit show a similar situation. Any infant food which would be as satisfactory as ordinary pasteurized milk, and which would be, at the same time, as available, as cheap and produce less rickets would be a great boon to our infant population.

From the statements which have appeared from time to time in the literature it seemed that evaporated milk might be such a food. Lowenburg² reported that he found no rickets in 175 infants who were given evaporated milk formulæ and no cod liver oil. Rice³ feeding evaporated milk formulæ acidulated with sauer kraut juice found that healing took place in cases of active rickets. The effect would seem necessarily to have been due to some agency other than sauer kraut juice since vitamin D is not present in any important quantity in sauerkraut. Unless the changes were due to climatic conditions it seemed likely that the more easily assimilable calcium and phosphorus of evaporated milk helped with the healing. There is, according to Sherman and Stiebling,⁴ an appreciable amount of vitamin D in cows' milk; and Daniels and Jordan,⁵ Willard and Blunt,⁶ Kramer, Latzke and Shaw,⁷ all attest to a greater calcium and phosphorus absorption from evaporated milk than from plain pasteurized milk. It seemed possible that with the greater utilization of calcium and phosphorus from evaporated milk the vitamin D present in cows' milk might be sufficient to protect against rickets.

With this question in mind a group of 199 infants from the child welfare clinics in Detroit were observed during the Winter months. Seventy babies, Group A, were given evaporated milk formulæ but no cod liver oil. Sixty-two infants, Group B, were given evaporated milk formulæ and three teaspoons of cod liver oil daily. All children used were free from rickets clinically and by X-ray at the beginning. A third group, C, composed of sixty-seven infants were fed plain pasteurized milk formulæ and given three teaspoons of cod liver oil daily. All these infants were examined

clinically, had X-rays of the long bones ordered each month and any who developed early signs of rickets or whose parents were not coöperative were given cod liver oil—and ultra-violet irradiation if it was thought advisable.

Table 1 shows all groups to be closely comparable as to age. The groups are of similar size and there is only slight variation in racial distribution. Group A was composed of fifty-four white and sixteen colored infants, Group B of forty-nine white and thirteen colored and Group C of thirty-two white and thirty-five colored babies. Group A and B comprise one hundred thirty-two infants on evaporated milk formulæ who were observed over an average period of 103.9 days each. The average gain per baby was 0.62 ounces per day. This group was significantly superior to Group C, which numbered sixty-seven infants on plain pasteurized milk and who gained only 0.46 ounces per day per patient. Nutritionally evaporated milk formulæ are obviously somewhat more satisfactory than plain pasteurized milk formulæ.

Table 2 shows the results of the X-ray films of the groups, with an additional Group D which is composed of forty-five breast and formula fed infants observed a preceding Winter.⁸ The formula babies in Group D were given plain pasteurized milk formulæ and only the percentage rachitic and non-rachitic is shown.

Group A showed thirty-one cases, or 44.3 per cent, of the infants developed rickets on evaporated milk without cod liver oil. There is some evidence of superiority of this group compared with Group D which had 55.5 per cent rachitic on a plain pasteurized milk feeding without cod liver oil. Group B who received evaporated milk plus cod

TABLE 1

Groups	No. of patients	Av. age at start in months	Av. No. of days per pt.	Av. gain in oz. per pt. per day	Racial distribution	
					White	Colored
A	70	4.4			54	16
B	62	3.5			41	11
A plus B	132	3.9	103.9	0.62		
C	67	4.1	101.6	0.46	32	35

TABLE 2

Groups	No. of patients	Feeding	Results of X-ray	
			Rickets	No Rickets
A	70	Evaporated milk and no C.L.O.	31 (44.3%)	59 (95.2%)
B	62	Evaporated milk plus C.L.O.	3 (4.8%)	39 (55.7%)
C	67	Plain pasteurized milk plus C.L.O.	3 (4.5%)	64 (95.5%)
D	45	Breast and formulæ and no C.L.O.	55.5%	44.5%

liver oil and Group C who received plain pasteurized milk plus cod liver oil are practically identical in their final results. Group B showed 95.2 per cent free from rickets and Group C 95.5 per cent normal. Babies given three teaspoons of cod liver oil daily are generally well protected against rickets whether fed evaporated milk or plain pasteurized milk. Also, babies who are given evaporated milk, to be adequately protected against rickets must be given cod liver oil.

CONCLUSIONS

1. One hundred thirty-two infants were given evaporated milk mixture during the Winter months and showed an average daily gain of 0.62 ounces while sixty-seven infants who were given plain pasteurized milk formulæ and similarly studied showed an average daily gain of 0.46 ounces. This seems to show a significant superiority for the group fed evaporated milk.

2. Seventy infants given evaporated milk formulæ were given monthly X-rays

but no cod liver oil and 44.3 per cent developed early signs of rickets. The remaining 55.7 per cent were negative. Evaporated milk without cod liver oil did not, under the conditions of this study, protect adequately against the development of rickets.

3. Sixty-two infants were given evaporated milk formulæ, three teaspoons of cod liver oil daily and X-rayed monthly. Four and eight-tenths per cent developed rickets as compared with a group of sixty-seven infants fed on plain pasteurized milk formulæ in which 4.5 per cent became rachitic. No evidence of superiority of either group is shown.

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REPORT OF CASE OF CHYLE CYST OF THE MESENTERY*

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Chyle cysts of the mesentery are of interest because of their rarity, history, origin and the infrequency of their being diagnosed preoperatively.

The first case of this to be described was in 1842 by Rokitsansky, who wrote at length concerning the findings at autopsy. In 1912, Emmanuel Friend¹ summarized the literature up to that time with fifty-two authoritative cases. In 1913 A. L. Benedict² revamped Friend's work and added cases up to ninety-six. He made the statement that there were probably not more than 200 cases that could be found by extensive search. The records of many hospitals, including Memorial Hospital, give no report of chyle cysts. Few surgeons even of large experience have had the opportunity of seeing this rare condition.

Before taking up the etiology, it might not be amiss to discuss briefly some of the anatomy of the mesentery. As you know, the mesentery of the small bowel contains the blood vessels, lymph vessels, mesenteric nodes and fat, between its two layers of peritoneum. The lymph vessels are called lacteals because of the color of the lymph here. They are found by two plexuses in the villi of the small intestine, one beneath the muscular coat and one below the mucous membrane. They anastomose and pass to the first series of mesenteric glands and then through the second and third series where they unite with larger trunks which in turn unite to form the receptaculum chyli, which is the beginning of the thoracic duct. This duct therefore drains the lymph from the parts below and also the chyle from the intestines.

ETIOLOGY

There is no definite etiology known but they probably are of embryonic origin as they are frequently found in the young. Dr. Dowd³ believes they are occlusion remnants in the developing peritoneal folds. Drs. Strode and Fennel reported a case in an infant which showed all the coats of the intestines and probably originated from misplaced entoderm epithelial cells in the walls of the gut. Moynihan, in his classification, believes they arise from obstruction of some of the lacteals, although he has been unsuccessful in producing them experimentally.

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There is also a possibility that trauma might be an etiological factor.

INCIDENCE

Sex apparently plays no part, as they are about equally divided. The age incidence in the series of ninety-six cases is as follows: under one year, 5; one to five, 6; six to ten, 9; eleven to fifteen, 4; fifteen to twenty, 7; twenty-one to thirty, 15; thirty-one to forty, 12; forty-one to fifty, 6; fifty-one to sixty, 8; sixty-one to seventy, 3; seventy-one to eighty, 3; not stated, 18. From this we can see that there is no special age incidence.

PROGNOSIS

The prognosis is especially and surprisingly good considering that most cases are operated upon by surgeons who necessarily had had very little if any experience with the condition. Sixty of the ninety-six cases recovered, fourteen died post-operative, twelve were diagnosed at autopsy, sometimes after many years' duration and sometimes after death from other causes. In ten cases the results were not recorded.

SYMPTOMATOLOGY

There are no symptoms which are pathognomonic of either chylous or mesenteric cysts. Miles F. Porter⁴ states that pain is the most constant symptom, especially if pressure is a factor, coming in attacks at various intervals of a few months to years. It is usually associated with vomiting, especially if there is encroachment of the nerves and blood vessels of the gut, and often with alternating attacks of constipation and diarrhea. If there is a partial obstruction or partial volvulus, there is an accompanying increased peristalsis to overcome the obstruction. Strangulation and gangrene of

the gut may occur due to pressure. These cysts may be crossed by gas filled gut and would give a tympanic sound. Small cysts may give no suggestive symptoms and could easily be confused with acute appendicitis, volvulus, intussusception, cholecystitis, ectopic pregnancy, or ruptured ulcer.

DIAGNOSIS

As far as I have been able to find, no one has made a preoperative diagnosis of chylous mesenteric cyst or even mesenteric cyst. According to Atchly⁵ the following symptoms, if borne in mind, would be of value in making a diagnosis:

1. Movable tumor, that is only slightly painful.
2. Normal or low blood count in the absence of obstructive symptoms and inflammation.
3. Vomiting.
4. Tympanic areas in close proximity to dull areas.
5. History of abdominal trauma previous to finding of tumor.
6. Pain of mild or severe obstructive nature increasing in attacks at varying intervals in absence of acute inflammation.
7. Diarrhea alternating with constipation in connection with the above symptoms.
8. X-ray examination showing narrowing of lumen of gut, that is, in relation to tumor mass.

COMPLICATIONS

Complications that are likely to occur are:

1. Intestinal obstruction.
2. Adhesions.
3. Intussusception from hyperperistalsis.
4. Hemorrhage into cyst.
5. Peritonitis.
6. Torsion of cyst and volvulus.
7. Impaction in pelvis.
8. Dilation of stomach.
9. Intestinal paresis.
10. Rupture of cyst. Dr. F. K. Dutton (VI) of Springfield has reported an interesting case of rupture of chylous cyst with recovery.

TREATMENT

1. Enucleation if possible.
2. Incision and drainage.
3. Marsupialization.
4. Aspiration.
5. Resection if the circulation has been damaged too extensively.

CASE REPORT

On February 28, 1939, I was called to see a young man of twenty-two who was suffering excruciating pain in the upper left quadrant of the abdomen. This began suddenly while he was putting his lunch in his lunch basket. The pain caused him to fall to the floor, and he was unable to walk, talk or anything else except cry and scream with pain. One half grain of M. S. did not relieve appreciably. The abdomen was rigid and a provisional diagnosis of ruptured ulcer was made and immediate operation advised.

His past history showed usual children's diseases. "Flu" in 1918 with good recovery. February, 1929, he fainted while at work in the foundry and slept for several days, gradually recovering. No diagnosis was made at that time.

Physical examination: Pupils react to L. and A.; mouth fair condition; no enlargement of thyroid; chest negative to P. and A.; heart normal in size. no murmurs or irregularities; abdomen rigid throughout; extremities and reflexes O. K.; Kahn test negative; urine, negative.

At operation there was found "a large mesenteric cyst filled with chyle—volvulus—knot tied in ileum about six feet from ileocecal valve." The volvulus was relieved, the tumor mass was aspirated and a specimen removed for pathological diagnosis. This specimen was unfortunately lost in the mails. His convalescence was uneventful and he left the hospital on the fourteenth day.

He remained in excellent health and free from any abdominal symptoms until January 3, 1930, when, a short time after the evening meal, he was suddenly seized with severe abdominal pain similar, but not as severe as the previous attack. He waited until morning before calling me. He was brought to the hospital by ambulance and operated upon about one hour later. Operation: Abdominal section. A band of adhesions extending from the chylous cyst encircling the gut causing strangulation. The cyst was about one-half as large as at previous operation. The band was freed and gut straightened out and a portion of the cyst was removed for pathological diagnosis. The raw area was covered over. The report from Dr. Warthin was "mass of atypical lymphatics—lymphatic cyst—no inflammatory reaction." He had a normal convalescence and went home on the nineteenth day, feeling fine.

About three weeks after leaving the hospital, he began having attacks of pain in the abdomen, not as severe as on previous occasions and relieved by enemata. On February 3, he had an attack which was not relieved by an enemata or morphine, so he was brought to the hospital. There was no distention and no vomiting and a stethoscope over the area showed a partial relief every four minutes. The physical examination was the same as on previous admissions. Blood count 5,000,000 reds, 100 per cent H., 21,000 W. Urine, negative. He was again operated and a great many adhesions were found attached to the old scar. There is a mass of small intestine agglutinated together over the tumor mass which is much smaller than at previous operations. The scar was excised, the adhesions freed and repaired and about five feet of bowel resected and an end-to-end anastomosis made. A 16 F catheter sutured in proximal end of bowel. Mesentery repaired, removing as much of mass as was possible without injuring large vessels. He had a very stormy time following this procedure, but left the hospital in four weeks in good condition.

He has had many attacks of apparent pain since, but these have not been accompanied by distention or vomiting, and have been relieved by enemata, morphine, or on several occasions by a sterile hypo-

CONCLUSIONS

1. Chylous cysts are extremely rare.
2. They should be borne in mind when difficulties arise in the differential diagnosis of abdominal cases.
3. All cases should be reported, regardless of outcome.

4. Treatment should consist of removal if possible and if not, the more conservative methods.

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ABDOMINAL OPERATIONS FOR FEMORAL HERNIA

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In the literature of the last fifteen years, we have read much of inguinal operations for femoral hernia. Less has been written about femoral operations of the Bassini type, but most surgeons whom I know still prefer that route. In reading and discussion, I have found very little consideration given to the abdominal approach; for that reason a short review of the subject is presented, with reports of two cases treated through abdominal incisions. No new operation is proposed, but certain criteria in the choice of operation are suggested.

In referring to "abdominal" operations, I mean those procedures in which the inguinal canal is not invaded, nor the round ligament (or spermatic cord) touched.

It is accepted *a priori* that some form of hernioplasty is the only satisfactory treatment of femoral hernia, exception being made only in those patients whose general condition makes recovery from any operation questionable, or healing extremely doubtful.

The following is regarded as a good statement of the principles involved in operative repair: (1) Isolation of the sac, (2) reduction or resection of its contents, (3) obliteration of the sac, (4) closure or blocking of the path of recurrence. The first two of these are scarcely debatable. The application of the third is variable, depending on the personal choice of the surgeon and the peculiarities of the individual case, the principle remaining unassailable. The fourth has been the subject of considerable debate. Some believe with Ochsner,¹ Russell,² and LaRoque³ that closure of the femoral ring is quite unnecessary; but I believe a majority of surgeons consider some buffer against the formation of a new sac in the old canal desirable.

Antiquated comparative statistics from French and German clinics seem to argue in

favor of closure of the canal; no recent figures on traced cases, treated in both ways, can be found.

The femoral operation (from below Poupart's ligament) is first considered because of its simplicity, especially by those who feel that reduction of the hernia and obliteration of the sac are sufficient for permanent cure. Many clinics point to excellent results from this method.

Objections to the femoral approach center about the dangers in the unusual case: the anomalous obturator artery, the bladder or rectum prolapsed in the canal, the escape of gangrenous structures into the abdominal cavity, or the reduction en masse of a strangulated hernia. Most femoral operations leave a conical space at the ring, or they depend upon some more or less complicated device to obviate this risk, such as Kummer's linen U-suture or Roux's bone staples. When these operations involve any steps beyond excision of a small free sac, and pursestring or other simple sutures to close the canal, they become more difficult and dangerous than inguinal or abdominal operations.

Operating from above gives the surgeon certain advantages, which have been elaborated upon by many advocates of the inguinal approach. Among these advantages are cited: better exposure of the field in releasing adhesions, reducing large or strangu-

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lated herniæ, or resecting gangrenous intestine, also the availability of tissues for plastic repair (aponeurosis, muscle, peritoneum). From the journals of the last ten years, one receives the impression that inguinal operations are increasing in popularity. Excellent discussions of the subject have been presented by Kilgore,⁴ Edmund Andrews,⁵ Cadenat,⁶ Northrop,⁷ Watson,⁸ and Bailey.⁹

The same advantages claimed for the inguinal methods may also be listed in favor of low abdominal operations, with additional safeguards. The inguinal canal is considered the weakest point in the abdomen, when we think of the possibility of post-operative hernia. Through higher incisions this risk seems much less, and the operation is not complicated by the presence of the round ligament or spermatic cord, with the accompanying vessels, nerves, glands and areolar tissue. Loosened sutures, local necrosis, or mild wound infections cause less worry.

The facility and simplicity of the abdominal approach may be appreciated only after its practical use on the living human subject; however, comparatively few writers have even referred to it.

Kellogg¹⁰ recalled that Lawson Tait operated via the transperitoneal route as early as 1889, closing the ring with horsehair sutures.

Savini¹¹ advocated a suprapubic, midline incision, without opening the peritoneum, with excision of the emptied sac and two catgut sutures to approximate Poupart's and Cooper's ligaments. His operation seems especially applicable to bilateral herniæ. With a unilateral defect, a lateral incision facilitates the work.

LaRoque³ presented in detail a transperitoneal operation, referring to seven cured cases, some of which presented unusual difficulties. He used a diagonal incision above the hair line on the affected side. The inverted sac was drawn outside of the peritoneum and included in the suturing of the parietal peritoneum. He considers closure of the femoral opening useless, even in cases with enormous defects. William B. Coley¹² criticized LaRoque's attitude on that question, and otherwise regards his technic as suitable only for a case with a large, irreducible hernia.

Cheatle¹³ reported a case in which he made a paramedian incision, ligated the sac

without opening the peritoneum, and sutured a curtain consisting of a square inch of pubic periosteum to Poupart's and Gimbernat's ligaments. His method of blocking the femoral canal seems inferior to simple suture of the ligaments, as suggested by Lawson Tait and Savini. Many would prefer LaRoque's diagonal incision.

Regardless of technical details, a low abdominal, extraperitoneal approach certainly rivals any femoral operation in simplicity and safety. Opening the peritoneum need not be feared, but it is necessary only in the more difficult cases; and it is in those difficult cases, that the advantages of the abdominal approach are most manifest.

In inguinal hernia, also, abdominal incisions have been given some attention lately. Cheatle's¹³ report was chiefly concerning paramedian incisions for inguinal hernia, eight such cases being discussed. Sores¹⁴ and Banerjee¹⁵ have recently presented intraperitoneal operations for this condition. In two cases, requiring appendectomy, I have treated right inguinal herniæ from above, with good end-results. However, the only reason for mentioning the subject here is to show that it is undesirable to invade the inguinal canal. Even in attacking inguinal hernia, some surgeons are devising means of avoiding that vulnerable spot.

The complete muscular relaxation induced by spinal anesthesia is an aid in the abdominal operations. Ether and probably ethylene are satisfactory, but nitrous oxide alone would hardly seem sufficient.

CASE REPORTS

Case 1.—A married woman, twenty-seven years old. She complained of menorrhagia, right iliac pain, leukorrhea, and pain after exertion in the region of a right femoral hernia. Three months previously, she aborted at the third month. Two years before, she suffered from thyroidism, following the birth of her only child. This became quiescent after six weeks of rest, with administration of compound solution of iodine.

On examination the tonsils were found hypertrophic, with evidence of chronic infection. Her thyroid gland was moderately enlarged, but her pulse rate averaged only 84, and her basal metabolic rate plus 10. There was tenderness over McBurney's point and on palpation over the hernia, which was easily reducible. Vaginal examination revealed a very relaxed perineum, bilateral cervical lacerations with chronic infection, and her uterus was fixed in a retroverted position.

At operation, under spinal anesthesia (nupercaine 8 mgm.), a midline suprapubic incision was made and the peritoneum opened. An egg-sized pad of omentum was easily withdrawn from the hernial sac. Then, working extraperitoneally, the sac was freed from the femoral canal, excised at the neck, and

two chromicized catgut sutures were passed to approximate Poupert's and Cooper's ligaments. The operation was completed by removal of a kinked, adherent appendix, uterine suspension, coning of the cervix, and perineorrhaphy.

The entire procedure required 110 minutes, including spinal puncture. Of this time, the treatment of the hernia required less than ten minutes. Convalescence was unmarred by any complication, and one year later her condition was satisfactory in every way.

This case illustrates the simplicity of caring for femoral hernia in the course of any clean pelvic or lower abdominal operation.

Case 2.—A pale, emaciated woman, married, thirty-eight years old. After operation three months before for chronic double pyosalpinx, she had a postoperative pneumonia and a subcutaneous slough, the wound finally healing after six weeks. Her operation had been outlined in two stages because of her prolonged low-grade pelvic infection, and poor general condition. This plan anticipated a second operation to include femoral herniorrhaphy, excision of vulvar varices, perineorrhaphy and treatment of chronic endocervicitis.

Her general condition improved sufficiently to permit consideration of the second operation; but, remembering the poor healing of the other wound, I hesitated to use either the femoral or inguinal route. A left paramedian incision was decided upon. The peritoneum was not opened; the sac was released from the femoral canal and found empty. Two catgut sutures were passed to narrow the femoral opening. The sac was plicated and anchored to the pubic periosteum at some distance from its former position.

Spinal anesthesia was used after the method proposed by Romberger¹⁶ (nupercaine 5 mgm., novocaine 60 mgm.). The time of the herniorrhaphy from incision to closure was twenty minutes. The entire operation from the first skin injection to completion of the vaginal work was seventy minutes. There was no post-operative complication, and nine months after operation there was no sign of recurrence.

The indications for the abdominal operation are: (1) In a large, irreducible or strangulated hernia: LaRoque's technic, with modifications to include some gesture to block the path of recurrence; (2) in any

case where other conditions indicate exploration of the pelvis or lower abdomen, excluding acute infections: operation analogous to Lawson Tait's or my first case; (3) in bilateral hernia: Savini's suprapubic extraperitoneal method; (4) in recurrent cases, or those in which normal healing may be considered doubtful: the extraperitoneal operation, as in my second case, with either a paramedian or diagonal muscle-splitting incision through the abdominal wall.

SUMMARY

1. At the present time, conservative surgeons may be expected to use some type of femoral operation in treating simple, uncomplicated cases of femoral hernia.

2. In cases where any difficulty may be anticipated, the abdominal operations seem safer, and capable of producing better end-results.

3. Many operators will still prefer the inguinal route. Its practicability has been amply demonstrated. I prefer to avoid the inguinal canal, except in case of co-existent inguinal hernia.

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PATHOGENESIS OF CHRONIC HEREDITARY EDEMA OF EXTREMITIES (MILROY'S DISEASE)

JOHNSON MCGUIRE and PEARL ZEEK, Cincinnati, have studied a characteristic case of hereditary edema of the extremities for several years. They describe the pathologic alteration in the skin for the first time. Microscopic examination revealed a normal epidermis, directly beneath which there appeared to be a condensation of the superficial portion of the dermal papillary layer. With Mallory's aniline blue stain this portion of the dermis had a membranous appearance and was composed of fine collagen fibrils, which in some areas were undergoing hyalinization. No elastic tissue was found in this layer, and there seemed to be fewer capillaries than normal extending into the papillae. In the reticular layer, the heavy collagen fibers were somewhat spread apart by edematous fluid, but the edema was

not nearly so marked here as in the deeper parts. The small groups of blood and lymph vessels, especially those of the subpapillary network, were surrounded by a considerable sprinkling of lymphocytes, which seemed to be more definitely related to capillaries and venules than to arterioles or larger vessels. Although the dermis was widened by the moderate amount of fluid present, there was also a definite increase in the number of collagen fibers, thus producing marked increase in the proportion of dermis to epidermis. The subcutaneous tissue was also much thicker than normal, being composed of large masses of edematous fatty tissue embedded in which were vessels and nerves. In some areas the stroma and fat cells were entirely absent, great pools of fluid being formed with no definite limiting boundaries. A few dilated lymphatics were seen, but much of the fluid occurred in spaces having no visible endothelial lining.—*Journal A. M. A.*

A TRIP TO RUSSIA—AUGUST AND SEPTEMBER, 1931

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On August 8 I found myself sailing down the Thames on a Soviet steamer bound from London to Leningrad, with an intermediate stop at Hamburg. Among the passengers were several prominent physicians of London, a group of scientists from Cambridge University and a couple of medical members of parliament—Dr. Salter of W. Bermondsey and Dr. Somerville Hastings of Reading. Life on board a Russian steamer is a unique experience. A fair proportion of the ship's personnel were women employed in various capacities, who were efficient and painstaking in the performance of their duties. One woman was a member of the engine room force, and it is not unusual on ships of this nationality to see a woman officer on the bridge. Three classes of passengers were carried, but the difference consisted solely in the character of the sleeping accommodation, as, in accordance with communist principles, all on board are supplied with the same food. Food was plain, abundant and of good quality, consisting principally of cabbage soup, chicken, stewed lamb, black bread, smoked fish, caviar, cheese, preserved meats and a variety of vegetables and fruits. Tea in tall glasses was obtained at every meal. The captain, who spoke English very well, sat at the head of our table and did his best to promote good fellowship. An interesting feature of every Soviet ship is the "Red Corner," usually a room in the fore part of the vessel fitted up like a parlor, and displaying upon the walls news posters, communistic maxims and pictures of Lenin. Here meetings are held nightly and matters discussed affecting the interests of the crew. Upon a permanent committee devolves the duty of investigating disputes or any unjust treatment on the part of the officers. Should an officer prove obnoxious to the men he is liable to be laid off at the home port. As a consequence, the relations between officers and men are marked by noticeable courtesy and there is an entire absence of the swearing and calling down so common on British ships.

Following a stoppage of thirty-six hours at Hamburg, we sailed down the river Elbe to the Kiel Canal, through which we passed to the Baltic Sea. Three days of sailing

thereon brought us to the Gulf of Finland, down which we ploughed our way for twelve hours and arrived at Russia's greatest seaport, Leningrad, on a beautiful Sunday morning. Rumor had it that the examination by Soviet officers on landing was something of an ordeal, but it proved to be really less vexatious than that of entering either France or England. As soon as the steamer was moored the passengers proceeded to a large room on the dock provided with comfortable chairs and with cut glass decanters of water and numerous clean glasses on a table. An official stood at the door of an adjoining room into which we were called one by one. My turn came after an hour of waiting. My passport was examined painstakingly and my baggage rather cursorily. Only one question was asked, "How much money, foreign or Russian, have you?" It appears that the importation of Russian roubles is forbidden under a penalty of three years' imprisonment. It has been possible to buy roubles in Berlin at the rate of ten for a dollar, whereas everywhere in Russia the rate is inflexibly maintained at only two for the dollar. When foreign money is exchanged at a bank or other official place in Russia, a slip is given showing the amount of roubles purchased. When roubles are paid out for any purpose, the dealer must record the transaction on the back of the slip. Before a foreigner is allowed to leave the country the slips are examined by an inspector. If it should appear that more roubles were expended than received in exchange, then trouble is in the offing. The formalities of admission were soon over and within five minutes I was in a motor coach speeding to the Hotel de l'Europe. Here a comfortable, well furnished room was secured at a very reasonable figure. The reasonable rates for the rooms,

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however, do not extend to the dining hall, where everything is à la carte. A dinner consisting of soup, roast beef, potatoes, salad, rice pudding and tea came to about four dollars. There are only two hotels in Leningrad to which foreigners may go and both are conducted by the government, as are hotels everywhere throughout Russia.

It is not an easy matter to get lost on the streets of Leningrad for they run in straight lines and cross at right angles, in contrast to those of Moscow, which are narrow, winding and crooked as can be. The principal street is the Avenue 25th October, formerly the Neva Prospect. The crowds on the streets resemble those seen on Second and Third Avenues, New York City. There are no idlers, or crowds on street corners, but everyone hurries along as if bent on a definite mission. A large percentage of the people appears unwashed, for soap is scarce and expensive in Russia. The shoes of many, too, are much down in the heels, for the government factories have been unable to turn out enough to go around. The shops are all drab affairs, with grimy windows and an absence of window display. There are no privately owned stores—all are government owned, and tickets are required to obtain anything except in one or two special stores exclusively for the accommodation of foreigners. In these special emporiums, "Torgsin" or "Universal stores" as they are called, everything that a foreigner requires can be obtained at fairly reasonable prices. Cigarettes are both cheap and good—one hundred for about a rouble and a half. I was never able to obtain a cigar anywhere in Russia for less than one rouble. Cigarettes are of home manufacture, whereas cigars are imported.

In all Soviet towns the streets are paved with cobblestones. The sidewalks as a rule are deplorable, with breaks here and there as if a ton of metal had dropped upon them. In Leningrad, as in most Russian cities, there are many small parks, attractively arranged with a profusion of flowers and ample seating accommodation. A special effort is being made, by such creations, together with art museums and people's palaces, to raise the cultural level of the people.

The Seventh Day is no longer a day of church-going or of suspension of labor. A Sunday ramble through Leningrad showed that church bells are silent and churches, big and little closed. Some were used as store-

houses, others as museums and a few as schools. One great church, that of St. Isaac's, was being used as an anti-religious museum. On its walls were huge posters showing that various phenomena were due, not to Providence, but the operation of natural laws. Tableaux of wax figures were an important part of the exhibit. One group showed over-fed priests taking tithes from poor, emaciated folk. Another conspicuous spectacle was the Pope of Rome and the Archbishop of Canterbury blessing cannon and soldiers going forth to war. The eclipse of the Russian Orthodox Church is well-nigh complete. Many beautiful edifices are being demolished to make way for commercial or other structures. In Moscow I witnessed the demolition of the great, golden dome of the "Church of the Redeemer," one of the most magnificent churches in all Christendom. Six charges of dynamite subsequently destroyed the building. This temple had been erected at a cost of fourteen million roubles to commemorate the retreat of Napoleon from Moscow.

The Soviet government is avowedly atheistic and believes in the dogma of Karl Marx that "Religion is the people's opiate." It forbids religious instruction in schools and requires that pupils be taught that God is a myth and that religion of all sorts is founded upon superstition. Many of the older members of the community view the situation with much bitterness of spirit, while the younger element is rapidly adopting the government's viewpoint. It is a curious thing to see an aggressive body of three million communists controlling the destinies of Russia and dominating the spiritual aspirations of 160 millions of people.

In spite of government impediments and legal restrictions it must not be supposed that Christianity is doomed in the land of the Muscovites. The base may perish but the sterling sort survive. In many Russian homes I have seen the wife with her altar and crucifix and the husband, a dyed-in-the-wool atheist, with his Lenin corner and communistic shibboleths. Since the Revolution there has been remarkable growth among the Sectarians. The Baptists have multiplied about threefold and are the strongest among the sects. They are especially strong in south Russia, and number about four million adherents. Proselytism is rigidly prohibited. It is the one country in the world where the Salvation Army has not pene-

trated. It is also forbidden to maintain a religious library in any church or to give religious instruction to young people under the age of eighteen. Several months ago the Baptist Synod sought permission from the government to import 25,000 Bibles, but the commissariat for education held that 2,500 was enough.

The foreign medical man in Russia has little trouble in visiting medical and scientific institutions. In most instances his personal card has all the force of a note of introduction. An interesting time was spent in Pavlov's laboratory. Professor Pavlov is a Nobel prize-man. Notwithstanding his eighty-two years, he still carries on experiments along the line of conditioned reflexes and the effect of various emotions upon gastric secretion. In one very large room it seemed as if half the dogs in Leningrad were gathered there. The esophagus of each had a slit six inches long, closed at the distal end. The dogs were industriously consuming pieces of liver and pancreas which, however, passed through the slit and returned again to the feeding pan below. To a container ran a tube from the stomach along which was conducted the gastric secretion, more or less intermittently. The effect from the various foods and excitations is carefully ascertained. After refinement and gauging of digestive power, the secretion is bottled and distributed to hospitals for therapeutic testing. A sip of the finished product sharply whetted my appetite for the next meal.

The largest hospital in Leningrad is the Metchnikoff with 2,000 beds. When I was introduced to the superintendent at the administrative building I at first thought he was the engineer or a janitor, for he was garbed as a worker with soiled smock, unpolished shoes, unshaven face and without a collar. Right here is one of the outstanding features which distinguishes the new from the old Russia. Everywhere one finds at the head of institutions and industrial concerns men who have risen from the ranks of labor, for the workers are today the peers of the land. The superintendent of the Metchnikoff Hospital proved to be a kindly disposed man, of good intelligence and eager to show every courtesy. Under the guidance of an orderly every part of the hospital, which consists of four or five detached buildings, was visited. In a Russian hospital there is almost an entire absence of

private rooms. Wards of fifteen or twenty beds are the rule. Scrupulous cleanliness prevails everywhere, but the visitor on entering a ward is impressed with the general untidiness of the beds. This is because the nursing service is conducted on a somewhat restricted plan. Beds are not made every day but the patient straightens things out as best he can. Where physically and mentally able to do so, he attends to his own toilet, a basin of water being brought in every morning. On a small table at the head of each bed are the medicines, which the patient takes himself at the proper times. The surgical operating rooms are splendidly equipped and the technic and skill of the surgeons of a high order. The various laboratories are staffed with earnest and efficient workers. Much attention is paid to X-ray work and light treatments. The apparatus employed is extremely complete and modern, most of it being German importations. The hospital possesses 600 mg. of radium, but opportunities for its beneficent use are infrequent because of the advanced stage of the disease when cancer cases are admitted.

The Belinski Hospital, Leningrad, is fairly representative of Russian asylums for the mentally afflicted. Its inmates are the usual run of dementia precox, senile dementia, paralytic dementia and manic depressive psychoses. A tour of the institution made it painfully evident that the government does not give the same consideration to the care and welfare of the insane as in other lines of social service. The building is very old. The halls, rooms and corridors are extremely bare and gloomy, unrelieved by any display of color or adornment. Many of the patients were not overly clean and some rather scantily attired. There are only 40,000 mental hospital beds in Russia to care for the needs of the population of 160,000,000. The annual number of applicants is nearly double the accommodation. The custom prevails to a large extent of boarding out the surplus in private homes.

One would search in vain in a Russian city for a doctor's shingle. Health and disease are responsibilities of the state and therefore all doctors are state employees. One or two are allocated to particular districts containing from one to two thousand inhabitants. The average salary is one hundred dollars per month, ranging from 15 per cent below to 15 per cent above that

figure. A Billings or an Osler would not get more in these communistic days. There is no incentive for a doctor to save money. He cannot send it out of the country, he cannot invest it in property or industrial concerns, for the government owns all and runs all. All sorts of workers have their unions. The doctors, too, have theirs, "The Medical Workers' Union," which includes not only the doctors but nurses, the doctor's chauffeur and even the hospital laundry workers. A doctor may abstain from joining his union, but if he does he will suffer in various matters of preferment. All food is rationed and obtainable by a system of cards graded "A," "B," and "C." An "A" card calling for food superior in quality and quantity is given to the unionist, while the non-unionist has to be content with the coarser ration of the "B" or "C" card. The ration, of course, must be paid for as the right to it only is granted. Again the unionist on reaching a certain age becomes entitled to a pension. Depending upon the circumstances of his employment the doctor may have free living rooms with light and heat.

In the various Soviet cities there are fifteen medical schools. The students are all specially selected and obtain free tuition and an allowance from the government for board and lodging. About 40 per cent of the students are from the peasant class. The diseases most rife in Russia are tuberculosis, malaria, typhoid and typhus fever.

From Leningrad to Moscow is 416 miles. A splendid train—the "Red Arrow"—leaves daily at midnight, arriving at 10:30 A. M. Moscow is a bit larger than Leningrad, but for muddy streets and shabby buildings it is unequalled in Europe. Street cars and buses afford congested transportation and there are taxicabs and droskies which are but relics of better days. The drivers of the latter know how to charge and ask from five to ten roubles for a trip of two miles. There are only two fairly good hotels for foreigners—the Grand and the Metropole.

Moscow has three hospitals on a par with the Metchnikoff in Leningrad. Clinical institutes and institutes devoted to preventive medicine are scattered through the city. One particular institute is unique in its way. It is called the "Institute for the Succor of Women." Here a woman not over three and a half months pregnant may be relieved free of charge. She must first, however, obtain a permit from a special of-

ficer, for the penalty for unauthorized abortion is one year's imprisonment. Armed with her permit she enters the institute one day, is operated on the next and goes home on the third day. Sixty cases are treated each day from 11 A. M. till 2 P. M. Five doctors work with extreme rapidity and in most cases no anesthetic is given. The *modus operandi* is to draw down the uterus by traction on the anterior cervical lip. The cervical canal is moderately dilated. With a blunt curette the uterine contents are deftly removed, a little packing is done and the patient returned to the ward. Over the entrance to each ward is the intimation, "You are welcome on this occasion, but do not trouble us again." Nevertheless, there are many repeaters. The mortality rate is one in 10,000, chiefly from uterine rupture or septic peritonitis.

Interest in the administration of Soviet justice led me one day to visit the "People's court," which deals with all lesser forms of crime as well as civil actions. Entering the court room I took the only available seat, which was on a form down in front, and which I learned later was specially reserved for prisoners. No notice was taken of me, however. On a slightly raised platform were the judges—two men and one woman, this combination being the rule in all such courts. As is customary, the judges were members of the working class. The woman might pass for a laundry hand, one of the men for a bricklayer and the other for a cobbler. The woman did most of the talking, and her speech was sharp and incisive. As is the rule, no police or other officers were in attendance. The man sitting next to me was presently called up. He was accused of pilfering from a store of which he was the manager. He made a stammering defense. Two witnesses were examined. The judges then retired to a side room. In ten minutes they returned and the woman addressing the accused announced that he was adjudged guilty and would spend one year in prison. He was then given a card which directed him to go to a particular prison. He is first permitted to go home, arrange his affairs and the next day or the day after report at the prison and begin his sentence. No one ever attempts to escape, for every individual is registered and the usual rationing of food automatically stops after conviction.

From Moscow the favorite trip of most

visitors is a voyage down the Volga—the “Main Street” of Russia. An overnight journey takes one to Nihzi Novgorod, at the head of navigation. Here one may take a steamer for a five days’ sail of 1,500 miles, to Stalingrad. The Volga steamers are built on the same pattern as Rhine steamers, but half again as long. They are usually overcrowded with a motley concourse of natives of all ages, and the sleeping quarters are overrun with bedbugs and cockroaches. Outside of atrociously cooked food and doubtful water, the steamers are not altogether lacking in comfort. On the upper decks are a profusion of easy chairs, and on the steamer on which I had passage—the “Turgeniev”—was one of rich upholstery especially made for the czar when he took the Volga trip in 1913. The scenery along the Volga is rather monotonous—low sandy shores on the left, moderately high ground on the right. The river varies in width from 400 yards to two miles, and is extremely winding. There are interesting towns along the way such as Karzan, Samara and Saratov, where the voyager may have at least a couple of hours ashore. In no other way can one gain such an insight into Russian conditions as along this great artery of a nation’s life and commerce. Factories may be visited where tractors, automobiles and other products are produced. From personal observation of the output of factories and the enthusiasm of the workers. I am convinced that the aims of the five-year plan will be amply achieved. In the lower Volga, and in the Valley of the Don, one may visit great collective farms where thousands of acres are under cultivation and an army of men and all kinds of machinery are employed.

The traveller along Muscovite highways must needs keep a watchful eye on his belongings for nowhere in the world have I seen such numerous and audacious pilferers as exist along the Volga. It would be wrong to say that the propensity to steal is a trait of the Russian character. The malefactors are undisciplined youths who prowl in gangs from one end of the country to the other. The typical worker or peasant is as a rule honest. He has some of the characteristics of the sons of Erin, inasmuch as he is open handed, friendly and uncommonly ready to be of service. He gives you his confidence easily and will talk volubly about himself, his family or his interests. He is as un-

sophisticated as a child, yet he can manifest a certain stoicism and bear changes in fortune unflinchingly.

The longest railroad trip undertaken was from Stalingrad to Moscow, a journey of thirty-six hours. On Russian trains there are but two classes—hard class and soft class. In the former the seats are bare boards and the rate cheap, about one copeck, or half a cent, per mile. In the latter the seats are upholstered and on long distance trains the car is divided into compartments, each having two berths. There are, as a rule, no dining cars, but at the various stations one may purchase from peasant women roast chicken, hard boiled eggs, black bread, cheese and apples at absurdly low prices. At important stations, too, there is always a tank of hot water with which to make tea. It often happens, as it did to me, that a man and woman will be billeted together in one compartment. In Soviet land the line between the sexes is not sharply drawn. There is a rare spirit of comradeship between men and women that is entirely impersonal. The women enjoy the same political and social privileges as the men and revel in the fact. They are practical minded, dress plainly and make no effort to enhance their personal charms. They are never consciously immodest and not less virtuous than the women of other lands.

In due time I stood once more on the dock at Leningrad, homeward bound. The inspector who had my fate in charge was a woman. She had a particularly hard face and a look of grim determination. She spent nearly an hour examining everything I had in my baggage. She set aside, bit by bit, some printed matter until I felt that counter-revolutionary evidence was piling up against me. Finally she got hold of something she did not quite understand and looked up into my face inquiringly. I gave her my most engaging smile. She, too, smiled and for the moment became feminine. Then, as if acting on a sudden impulse, she stamped my passport, swept everything into my bag and I was free to go on board the steamer.

The question is often asked, “Can the Soviet system endure?” My belief is that it is too strongly entrenched to be easily uprooted. The vast extent of the country is its greatest safeguard. No single nation is powerful enough to overrun it. In a con-

test with Japan, Russia would stand to lose Vladivostok and a section of Siberia, because of the necessity of transporting men and munitions over a single track, 5,000 miles long. In such an event Poland and Rumania, who have deep-seated grudges against the Soviets, might be tempted to attack in the

rear, backed perhaps by France. What the government most fears at the present time is intervention by a group of capitalist countries, bent on stemming the advancing tide of communism. Schisms in the ruling clique, leading to a more liberal policy, are among the possibilities of the future.

MICHIGAN'S DEPARTMENT OF HEALTH

C. C. SLEMONS, Dr.P.H., M.D.,
Health Commissioner
LANSING, MICHIGAN

COMMUNICABLE DISEASES

According to expectancy based on past behavior of incidence, measles is exceedingly prevalent throughout most of the state. The incidence began to climb in the latter part of February when some of the western cities and counties of the state had a rather sharp outbreak. The total number of cases for the state continued to increase slowly until about the middle of March. There was then a rather sharp uprising in the trend and by the latter part of April the number of cases had increased to approximately 2,000 per week.

This is based on the number of reports and it is quite evident that there are many cases that do not come to the attention of a physician or to the knowledge of the health officer. We cannot at this time say what the number of deaths due to this cause will be. There has been quite a call for the sodium citrate solution which is furnished by the Michigan Department of Health in connection with the administration of whole adult blood for the prevention and modification of measles.

Scarlet fever incidence has continued quite high. In February, 1,959 cases were reported for the state. In March this number rose to 2,056 and in April there were 1,823 cases. This is more than twice the mean of the last five years during April. For the most part, the cases are mild, although there appears to be some indication in certain districts, notably in Detroit, of a slightly increased virulence.

The incidence of diphtheria is remarkably low. The number of cases reported for 1931 was 1,831. This is far below the lowest previous record. For the first four months of 1932, the number of cases reported is 565. This is to be compared with

683 cases for the same period last year. If this incidence continues, 1932 will see a new low mark established.

Smallpox has been exceedingly low throughout the winter months, and during April there were only 27 cases. Practically all of these cases have been in the southwestern section of the state. Because of this low incidence of smallpox it is difficult to impress people with the importance of vaccination. Needless to say, if we do not keep up our number of vaccinations, we may expect the rate to greatly increase at some time.

The outbreaks of typhoid fever referred to in previous issues of the Journal in Bay City, Monroe, Yale and Flint have all subsided. These outbreaks have increased the number of cases for the winter months somewhat above the average for the last five years. Cases now being reported are less in number than usual.

C. D. B.

NEW REGULATIONS FOR ISOLATION AND QUARANTINE

The State Council of Health at its March meeting adopted minor revisions of the rules and regulations for the control of communicable diseases. The regulations as amended are being printed and distributed to all health officers and will be in effect as soon as this distribution is made. Physicians having cases of communicable diseases should ascertain from the health officer whether their cases are affected any by the new regulations.

C. D. B.

NEW BIOLOGICALS

Rabies vaccine is now being distributed without cost by the Michigan Department of

Health. Health officers in the larger centers will be supplied with an emergency package of this material at all times. The vaccine is put up in packages of seven doses each and for the ordinary case, 14 doses at daily intervals are advised. It is not necessary nor is it wise to treat with rabies vaccine every person who has been bitten by a dog. It is far better, if the dog in question is known and can be put under observation, not to start antirabic treatment unless the dog shows some indication of rabies. The Michigan Department of Health desires a report from every physician who uses rabies vaccine supplied him by the state.

Old tuberculin for the von Pirquet and the Mantoux test will also be supplied without cost at an early date, by the department. This will be sent on request to any physician.

C. D. B.

CHILD HYGIENE ACTIVITIES

The series of Women's Classes in Ottawa County conducted by Doctor Alexander has been completed, and a similar series of

classes has been started in Wexford County. Doctor Alexander will be assisted by Helen Linn, R.N. Doctor Edna Walck, successor to Doctor Muriel Case, began a series of Women's Classes in Clinton County on Monday, April 25.

A Breast Feeding Campaign is being conducted in Leelanau County by Nell Lemmer, R.N. Miss Lemmer will remain in the county about two months.

Julia Clock, R.N., is assisting Martha Giltner, R.N., in her prenatal program in Berrien County.

Child Care Classes are being completed in Kalamazoo and Monroe Counties and the two nurses who are conducting these classes, Beatrice Ferriby, R.N., and Bertha Cooper, R.N., will carry on a Breast Feeding Survey in Montcalm and Tuscola Counties, respectively.

Esther Nash, R.N., is in the northern part of the state arranging the schedules for Women's Classes and making preliminary arrangements for Child Care Classes in schools next fall.

FAMOUS MEN IN MEDICAL HISTORY

VICTOR C. VAUGHAN

By CHARLES H. McINTYRE

Late in the afternoon of a beautiful September day, some fifty-five years ago, two young Missouri farm boys alighted from the train at the old Michigan Central depot in Ann Arbor. Imbued with the desire for scientific training and induced by Douglas and Prescott's text on Qualitative Chemistry, one of these boys, Victor Vaughan, came to Michigan interested primarily in Chemistry; the other, Edward Samuel, contemplated entering the Pharmacy school. After dining and spending an evening at the old Cook house which has later become the Allenel, they doubted the wisdom which led the authorities to select Ann Arbor rather than Detroit as the seat of the University. Early the following morning they walked East on Huron Street and approaching State their spirits rose; they were becoming impressed with the beautiful fall landscape which has made Ann Arbor famous. Arriving at State they turned South and after a

two blocks' walk came to an area of forty acres surrounded by a high picket fence which was sensed to be the campus, though the outlook was far different than we see today.

Young Vaughan was certain that he was to work in the chemical laboratory but he further was desirous of entering the graduate school to secure a higher degree. On visiting President Angell's office and after mistaking which of the two men in the office was the president he was introduced. Vaughan soon found that his diploma from Mt. Pleasant College, back in Missouri, was not recognized by the University and his fate as to doing graduate work was left in the hands of Professors Prescott, Harrington and Hilgard of the departments of Chemistry, Biology and Geology. Prescott readily gave his approval, Harrington refused and Hilgard was yet away on his vacation. Knowing that Hilgard was his

only hope and that mineralogy was his great weakness Vaughan procured a half bushel of potatoes and with the aid of Dana's Mineralogy cut out the shapes of all crystals therein described. The day subsequent to Hilgard's examination Vaughan became the student assistant in geology and so continued for the remainder of the year. Late in the year he wrote a thesis entitled "The Separation of Arsenic and Antimony" and in June was granted the degree Master of Science. In the fall of 1875 he continued the same graduate work as a candidate for the degree Doctor of Philosophy. Incidentally this was the first time that this degree was offered "in course" at Michigan. Three theses were composed during the year, one on the separation of Arsenic and Antimony, another on certain fossils found in the region of Ann Arbor, and the third entitled "The Osteology and Myology of The Domestic Fowl." Dr. Vaughan writes:

"An Ann Arbor bookseller, S. C. Andrew, somehow acquired an insane idea that he could publish this last thesis in book form and make money. I, having no illusions, gave him a copy of the manuscript. Andrews never confessed to me how much he lost on the enterprise. It made a neat little volume, some copies bound in green, others in red. He sold at least two copies; I know this, because I bought them though I never dared show them to anyone."

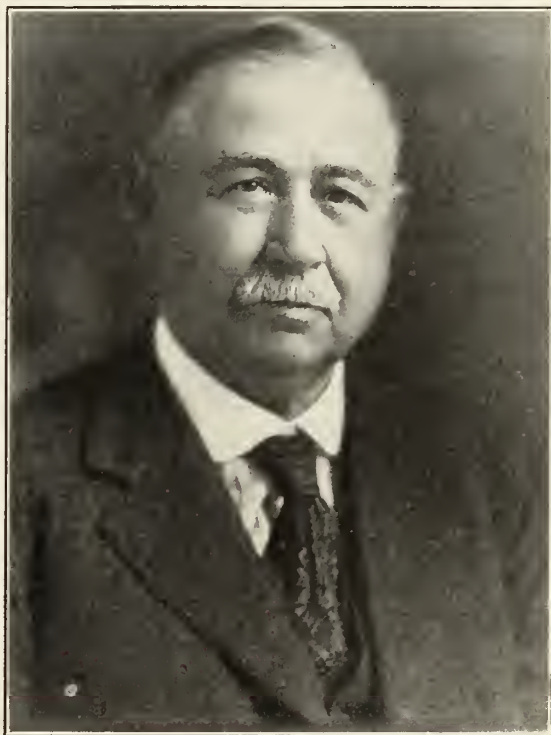
The degree, Doctor of Philosophy, was granted in June, 1876. In December, 1875, a storm had broken loose in the chemical laboratory over a financial matter, involving Drs. Douglas and Rose. Though the men were never convicted of any charge both were discharged and Vaughan was made instructor in Physiological Chemistry. He states that he always looks upon his first appointment to the teaching force of the University as due to a regrettable and sorrowful affair. Dr. Rose was very popular with the students and Vaughan looked forward to his first meeting of the class with some dismay. He states:

"I wrote enough on the function and structure of the kidney to fill many hours. When I stepped upon the rostrum there was neither applause nor hissing; without prelude I began. When I closed the walls rang out with approval and the crowd filed out, singing 'He's a jolly good fellow.'"

Vaughan entered the Medical school in the fall of '76 and was granted his degree in 1878. During these two years his work in chemistry was continued and in 1878 he put in book form the lecture notes in Physiolog-

ical Chemistry, this book passing through three editions in as many years.

At about this time the medical school was greatly agitated by legislative attempts to engraft homeopathy upon its teaching. Finally the legislature made all University



VICTOR CLARENCE VAUGHAN

appropriations contingent on the establishment of a full homeopathic school, quite independent of the Medical school in the University, and provided a special appropriation for that purpose. The legislature held the purse strings and the new school opened its doors in 1875. Dr. Vaughan states, "I never objected to the establishment of the homeopathic school or its maintenance in the University. In fact I looked upon it as an experiment and held that if scientific medicine could not successfully compete with sectarianism, it deserved to fail. There can be but one Medicine. Medical cults are all parasitic growths and must fail in the end."

In 1877 Vaughan was recommended for promotion by Dean Palmer. The Board sent back the charge that Vaughan was guilty of atheism. He sent back this reply, "Tell the board that I decline to make a confession of faith to them. This position concerns the

teaching of science and has no relation to religious belief." The Regents discussed the matter at odd intervals for two days and sent back a request to the faculty that they recommend another man to teach histology, but the faculty returned the name of Vaughan each time. In the fall another man was appointed to teach histology. In the summer of 1877 Vaughan lectured at the summer session of the Normal school in Westchester, Penna. Following this he went to Missouri and was married to Dora Catherine Taylor. Dr. Vaughan was promoted to the position of Assistant Professor in 1880, and for the next three years his duties were divided between the Chemistry department and the Medical school, but even after his appointment in 1883 to full professor of physiological and pathological chemistry, his working quarters remained in the chemical building. The promotion to the professorship in 1883 came at the time when Dr. Vaughan was likewise serving as Associate Professor of Therapeutics and Materia Medica. In 1887 the titles were changed to Professor of Hygiene and Physiological Chemistry and Director of the Hygienic Laboratory. As early as 1877 it was realized that the present quarters were not adequate for studying the special problems of health and disease in which Vaughan was interested. With the coöperation of the State Board of Health the legislature of 1887 appropriated \$40,000 for the erection of a building to be jointly used by the Hygienic Laboratory and the Department of Physics. As stated at the time the purpose of the Hygienic laboratory was, first, to study the causation of disease; second, to make analyses of food and drinking water, and, third, to teach the causes of disease. It was soon evident that the new science, Bacteriology, could not be thoroughly applied in this laboratory unless a first hand knowledge of the new methods was acquired. Accordingly Dr. Vaughan spent the summer of 1888 in Koch's laboratory, under the direction of Carl Fraenkel. The laboratory was completed in 1889 and was the first in the country which systematically taught Bacteriology.

Vaughan was rapidly manifesting a great interest in building up to a high level the faculty of the Medical School and when in 1888 an independent chair of Physiology was created, the selection of the man to fill

this chair was largely left to Vaughan. Through his work in Physiological Chemistry he was in touch with the progress of Physiology and strongly urged and secured the appointment of Henry Sewall, who proved to be an inspiring teacher. With the death in 1887 of Dean Palmer, Doctor Ford nominally became Dean but the actual administration was left largely to Vaughan. Dr. Vaughan had suggested that the length of training be increased and in 1877 the annual session was extended from six to nine months, another year was added in 1880 and a fourth year in 1890. Good-naturedly Dr. Ford had replied to the plan, "Have your way but I look forward to the time when, on giving my first lecture, I will begin 'My Dear Sir,' since there will be only one student on the benches." Needless to say, there was no decrease in the number of students. With the increase in time required for medical training there was likewise an increase in the entrance requirements and by 1890 a diploma from an approved secondary school was demanded. In 1892 certain prescribed subjects were demanded in addition to a diploma from a secondary school. This progressive increase in requirements culminated in 1909 in two years or sixty hours of collegiate work. Dr. Vaughan became Dean on the death of Dr. Ford in 1891, and it is during the following ten years that his services to the school were of the greatest importance, for in 1891 there were seven vacant chairs to fill. It is seldom that a new Dean has the opportunity to select a faculty to suit his own ideas and the selection of new men largely predicted the future history of the school. John J. Abel became the Professor of Pharmacology and was succeeded in 1893 by A. R. Cushny, Charles De Nancrede was appointed to Surgery, George Dock to Medicine, William Howell to Physiology, James McMurrich to Anatomy, Fleming Carrow to Ophthalmology and Paul C. Freer to General Chemistry. The medical faculty in the 90's was perhaps unsurpassed in this country or abroad and, as Dr. Vaughan jokingly puts it, was a full time faculty on less than half time pay. Having secured an excellent faculty Dr. Vaughan's next endeavor was to see that each member had the best possible facilities demanded by his work and then to let him alone.

At about this time there arose the ques-

tion which then and has since been much disputed, concerning the utilization of the clinical facilities of Detroit. Dr. Vaughan states:

"The University of Michigan Medical School was from the start a scientific in contradistinction to a practical or clinical institution. This was not altogether due to preference on the part of its founders but was a necessity. For twenty-five years it had no hospital—not a building which by any stretch of imagination could be so denominated. As late as the 80's one of the graduates urged me to leave the school, arguing that the school must fail on account of its lack of clinical opportunities, but I saw the argument from another angle—the deficiency in the city schools at that time in scientific training. I have always insisted that the connection between a Medical School and its University should be real and vital and not simply a paper one."

Dr. Vaughan first asked the legislature for an appropriation for a new hospital in 1890, and it was largely through certain undignified opposition that the request was finally granted and the clinical facilities greatly bettered. As a result of Dr. Vaughan's further interest an appropriation in 1915 started the way for the present new University Hospital. Indeed it must be acknowledged that all the appropriations for increase in medical facilities between 1890 and 1921 are indicative of Dr. Vaughan's interest. The graduate work in the school was likewise encouraged in every way by Dr. Vaughan; soon after becoming Dean he obtained permission from the Board of Regents to enroll physicians and others in the laboratory courses on the payment of a small fee. The Medical library which the University boasts is largely a result of Dr. Vaughan's early belief in the necessity of a working library. Dr. Vaughan has said, "A medical school without a good research library is like an automobile without gasoline; it will not go. The library is one of the strongest ties that has held me to the University when higher financial rewards tempted me to go elsewhere."

Dr. Vaughan was retired as Dean of the school with the title of Professor Emeritus, in 1921, having served thirty years as Dean and having been connected with the University for a period of forty-six years. President Ruthven has stated, "His service was the maximum one that a member of the staff can render. Dr. Vaughan's monument is a medical school which has few rivals for its output of scientific contributions and men of marked ability as scholars and practitioners." Dr. Vaughan was instrumental in the

founding of both the Research and Scientific clubs here on the campus, and unless absent from the city he rarely missed a meeting of either of these organizations. It is said of him that he always brought to the clubs a never failing good cheer, a fund of humor and a wealth of stories out of his varied experiences. Dr. Hobbs said of these meetings, "Here as nowhere else this group of colleagues came to know and love the man of high ideals, of generous impulses, of straightforward methods, and of keen interest in his fellow workers, both in the University and throughout the country."

VICTOR VAUGHAN AS A TOXICOLOGIST,
MEDICOLEGAL EXPERT AND IMMUNOLOGIST

The real foundation of Dr. Vaughan's success as a toxicologist and a medico-legal expert perhaps lay in his early and extensive experience as a teacher, first of Latin, then of chemistry (eight years), medical chemistry (one year), physiology (three years), physiological and pathological chemistry and *Materia Medica* (four years), and finally as director of the hygienic laboratory and professor of hygiene and physiological chemistry for twenty-two years. Dr. Vaughan was the true exemplification of the vigorous and conscientious student attempting to work out and master every detail of the chemical, toxicological, physiological and pathological problems which he attempted to present to his classes. His knowledge of toxicology was undoubtedly greatly increased by the great numbers of experiments which he performed, either for or with his students each year. "Cautious and always extremely critical of his own work, widely conversant with the literature and stimulated by his many associations with able colleagues and eager students, Dr. Vaughan used these experiments as the foundation upon which he arose to the highest pinnacle as a toxicologist and medico-legal expert." The rôle played by pathogenic bacteria in many epidemics and in food poisoning was far from understood in the earlier years of his work, in fact the "germ theory" of disease was by no means universally accepted. Consequently much of the work done in Dr. Vaughan's laboratory was devoted to clearing up the hazy relations existing between true chemical poisoning and that poisoning due to living bacte-

rial organisms. With the first work of arsenic previous observations were confirmed, namely, that arsenic will diffuse from a localized point throughout all the tissues of a dead and buried body. As a result of these observations laws were enacted prohibiting the use of arsenic in embalming fluids and demanding greater care on the part of druggists in dispensing poisons. While yet a comparatively young man Vaughan's reputation along these lines became widespread and the demands for his services were continual. It should be acknowledged that Dr. Vaughan never accepted service in such a case unless the claims on his side had scientific justification. In his *Memoirs* Dr. Vaughan states:

"My experience as a medico-legal expert has been confined almost exclusively to those cases in which poison is supposed to have played a part. I know nothing about other branches of legal medicine or expert testimony. I admit, now that I am through with all this, that but few experiences ever gave me greater thrills than came from cross examination by a bright lawyer. In such instances I only hoped that my antagonist would fight fair, but if he should strike below the belt I generally managed to deliver my thrust at a like part of his anatomy. There is no other state in which my brain remains so clear and acts so promptly as when I am in the witness chair."

In the year 1885 Dr. Vaughan arrived at the conclusion that he had found in poisonous cheese a new chemical compound depending on bacterial action, to which the name "tyrotoxicon" was given. Strenuously he strove to isolate this poison in pure form but with the passing of years it is now realized that such a pure chemical compound perhaps never existed.

"Vaughan was working at a time when the conceptions of bacterial toxemia were dominated by the belief that the poisons involved in infectious processes were produced by the putrefactive and fermentative actions upon the proteins of the body. Vaughan and Novy studied not only the ptomaines themselves but sought for similar substances in cultures of pathogenic organisms. They isolated from mixed cultures of typhoid stools a poisonous base which was obtained as a crystalline salt and which produced purging and temperature elevation in cats and dogs. Similar substances were obtained from a number of other bacteria. This work led logically to biochemical investigations of food poisons; studies which contributed not only to a better understanding of the toxic protein derivatives themselves but had an important and beneficial effect upon the development of methods of food preservation."

"Vaughan's work in the demonstration of a toxic constituent, chemically separable from the bacterial body, with which acute death could be produced in guinea pigs similar symptomatically and physiologically to anaphylactic death, had an important effect

on the reception of the relatively recently observed anaphylactic phenomena."

His book upon this subject in 1913 also includes the ideas upon protein fever which have now become an important link in the chain of our knowledge concerning the development of idiosyncrasies. The list of publications dealing with the work on toxicology and immunology is indeed long and Dr. Vaughan contributed extensively to various medical systems on the material in this field. The work on cellular toxins published by Vaughan and Novy in 1902, that on leukomaines and ptomaines and the later publication entitled, "*Protein Split Products*," are prominent in the list.

DOCTOR VAUGHAN'S WORK IN EPIDEMIOLOGY AND PUBLIC HEALTH

That Dr. Vaughan was versatile, there can be no doubt. Perhaps we may say that his second greatest interest was in public health, assuming that the destiny of the University of Michigan Medical School remained foremost in his mind. Dr. Vaughan, through his own personal efforts and through his teaching to the thousands of his pupils and followers, has probably done more toward forwarding the relatively new field of Preventive Medicine than any other man in this country. The first indication we have of Dr. Vaughan's interest in public health and hygiene was in the late 70's, when he became intensely interested in popular health instruction and how it might be disseminated in terms understandable by the laity. In the early 80's the State Department of Health began sponsoring sanitary conventions to study ventilation, water supply and smallpox vaccination; in 1882 Dr. Vaughan was elected Secretary of one of these conventions which was held in Ann Arbor. Dr. Vaughan was appointed a member of the State Board of Health in 1883 and served continuously, much of the time as President, until the board was abolished in 1919. An early interest in food and water pathology is evidenced by the fact that he served as chairman of two important committees, one on Food, Drink and Water Supply, the other on Poisons, Chemicals, Accidents and Special Sources of Danger to Life and Health. In 1883 Dr. Vaughan became a member of the American Public Health Association, and was soon actively at work, under the supervision of Major

General George Sternberg, studying the relative germicidal value of the various substances used as disinfectants, this being done since there was anticipated a visitation of cholera in the near future. In 1886 Dr. Vaughan contributed the prize winning essay entitled "Healthy Homes and Foods for the Working Classes." During the next three years the new hygienic laboratory was being constructed, and in this interval Dr. Vaughan published model diet tables for use in typhoid fever—there were at the time about 10,000 cases of the disease in this state each year. The objective of the new hygienic laboratory has already been discussed and the first problem confronting the staff was the analysis of drinking water from the areas where typhoid was most prevalent. Samples were studied carefully and in the period of one week reports on each sample were submitted. The epidemiologist of 1888 had many sad experiences attempting to convince the layman that the drinking water harbored the cause of the prevalent typhoid fever. Dr. Vaughan frequently told the story of the well used by his neighbors, the water from which he declared unsafe after several cases of typhoid had developed in the household, and how he had boarded and nailed up the opening and removed the pump handle, only to find afterward that another opening had been cut in the boards and a new pump provided, with the inevitable result that there was more typhoid. Indeed, he stated that this persistent obstinacy and foolhardiness of the townspeople enabled him to provide for his growing family, since he cared for the sick as family physician in addition to giving advice to the healthy with respect to disease prevention. In 1887 the etiology of diphtheria was said to be sewage and water pollution. Dr. Vaughan boldly stated his conviction while attending the International Medical Conference that "diphtheria is not a filth disease but is induced by a specific poison." This statement was made before Klebs and Loeffler had announced their discovery of the causative organism.

We will pass at this time to 1898 and the onset of the Spanish-American War. It will be well here to tell of an interesting incident in connection with Dr. Vaughan's entrance into the fray. He writes:

"After the sinking of the Maine in the harbor at Havana, the proclamation of war against Spain and

the call for volunteers, I was anxious to enlist; but, having a wife and five children dependent upon me, I could not conscientiously do so. There was quite an outbreak of enthusiasm for enlistment among the students of the University. President Angell was then in Constantinople as United States Ambassador to Turkey, and President Hutchins, who later became permanent president, was acting in that capacity. One day he came to me and said that the students were all astir about the war, wanted to hold a mass meeting with speeches, and might be stampeded into enlistment. He advised that the mass meeting be permitted, that representatives of the students be invited to talk, and that the older and wiser members of the faculty pour the oil of caution upon the troubled waters of youth. As Dean of the Medical School I was asked to attend the meeting and to do my part in allaying and cooling the enthusiasm and patriotism of the students. Reluctantly I consented to do my small share in this work. University Hall was crowded. I sat on the platform and listened to talk after talk by my older and wiser colleagues. One admonished the students that their first duty was to their parents, that they should not enlist without consulting them, and that they had parents distributed from the Atlantic to the Pacific. A second told the students that there were enough unemployed in this country to fill the quota called for by the President and advised waiting until the unemployed had enlisted, and if it appeared that the ranks were not filled by these, enlistment by the students might be considered. I had promised President Hutchins that I would be at least moderate in my speech, and I went to the meeting fully determined that I would comply with my promise. I have long known that in speaking I labor under a serious defect, but I had no realization until that night of the extent to which this defect dominates and determines my actions. Many a time I have gone before an audience intending by my words to palliate and to compromise, but after I begin to talk I have always been led by my convictions rather than by my intentions. At the mass meeting I was called upon to follow the colleague who had spoken of filling the ranks with the unemployed. This drove me into a mental frenzy, and standing before the audience, I said: 'God pity the country whose tramps must fight its battles; it is true that you are here to acquire an education with the purpose of fitting yourself for the work of life; but I would rather see these walls crumble into dust than to see you hesitate when your country calls. You have duties towards your parents, but your first duty is to serve your country.' Along this line I rushed on in a verbal flood until my time limit was reached. The next afternoon Governor Pingree, in his office at Lansing, called me by telephone, informed me that he had read my speech, had signed my commission, and that I would report for duty at Camp Alger, Virginia, without delay. Some enlist because they like the soldier's life, some for patriotic reasons, but I received my commission at the outbreak of the Spanish-American War because I talked too much."

Time forbids telling of the interesting experiences which Dr. Vaughan had during the war; suffice to say, the entire campaign was divided into two fronts, one against the Spanish Army, the other against the devastations of typhoid fever, malaria and yellow fever. During the first week of June, 1898, Dr. Vaughan became ill, and his vivid de-

scription of the onset of yellow fever is indeed enlightening:

"About four p. m. I began to feel a pain in the small of my back which rapidly grew more severe; in fact, I could hardly stand or walk, or at least in either of these positions I suffered rather severely. It required no diagnostic skill on my part to tell what was happening within my anatomy. I went to my tent, or at least to my field desk, and wrote to my wife telling her, I believe, the biggest falsehood I ever perpetrated upon her. I told her that I had been ordered into the interior of Cuba, that as near as I could calculate I would be gone two weeks, and that during that time she must not be anxious if she had no letter from me. I then went to the chief correspondent of the Associated Press, telling him that I was coming down with yellow fever, and asking that he say nothing about it in dispatches home. I had an orderly change the sheets on one of the cots in the hospital and there I dropped as soon as possible. With the first dawn Doctor Guiteras came, swinging his cane, making an effort to whistle a tune; he examined me most carefully, and said: 'Only a little malaria. You will be all right in a few days. Tomorrow I shall give you quinine. Don't you think that the air up at the yellow fever hospital on the mountain side is much better than it is down here on this low wet ground?' I expressed my agreement with him and my readiness to proceed to the yellow fever hospital and I made a movement to sit up on the cot. Gently, but firmly he held me down and then he explained: 'Your temperature is above 105 degrees; your pulse is below forty; a change in position, even the sudden lifting of an arm, might stop your heart. You will not move on any account. Men will come, lift your cot, place it on a flat car, and you will be carried to the yellow fever hospital. I shall go with you.' I was placed, as far as treatment was concerned, at first in the hands of a very able Cuban physician, Eccheverria. Pretty soon I was vomiting the characteristic black, almost tarry stuff, which gives this disease its Spanish name of 'el vomito negro.' My stomach would begin to contract its walls slowly, but most painfully. I could feel it constantly growing smaller and harder until it had apparently proximated the density and size of an ivory billiard ball, and then with a spring the walls would dilate, accompanied by a gush of black vomit. It seemed as though the blood in the capillaries of the stomach wall was being forced out under such pressure that even the red blood corpuscles were broken into the finest particles. Doctor Eccheverria's treatment, for which he had at that time a great reputation in Cuba, consisted essentially in the administration of a large dose of calomel, twenty or more grains, to be followed by the frequent drinking of a half pint or more of a saturated solution of Epsom salt, flavored with sliced limes or pressed lime juice. In addition to the large dose of calomel and the continuous administration of the lemonade, the doctor starved his patients. . . . As far as I can remember, my stomach became tranquil and free from pain in the early afternoon of the first day in the hospital. . . . On the tenth day after I had come down with yellow fever Captain Ireland came to my assistance and prepared me to leave for home on a transport. When I left the United States I weighed 200 pounds; when I returned, I weighed 150 pounds. . . . I may add that in 1924, twenty-six years after the battle of Santiago, I received a citation for 'gallantry on the field of battle.' Uncle Sam may be slow in conferring honors but he seldom wholly forgets."

On reaching New York in August, 1898, Dr. Vaughan found an order to report to the Surgeon General in Washington. Within a few days the Typhoid Commission had been appointed, instructed and set to work. This commission consisted of Major Walter Reed of the regular army, Major Edward Shakespeare, brigade surgeon, and Major Vaughan as division surgeon. The views held at that time as to the epidemiology of typhoid fever were as follows: first, typhoid fever is a specific disease due to infection with the Eberth bacillus; second, it is disseminated by the contamination of drinking water, or, as was said, it is a water-borne disease; third, it is not known to be transmitted through other agencies, though flies have been suspected; fourth, it can be scientifically diagnosed by the agglutination test during life and by the pathological findings after death. Typhoid had appeared in every regiment during the 1898 campaign, more than 90 per cent of the volunteer regiments being invaded by this disease within eight weeks after assembly in camp.

The investigations of the commission brought to light many facts which were destined to affect favorably the health of the troops in future wars and materially assist in the gradual elimination of this disease from civil populations. Among the more important conclusions drawn from this study, which is probably the most complete epidemiologic study of typhoid fever ever made, are the following: first, typhoid fever is disseminated by the transference of excretions of an infected individual to the alimentary canal of another; second, the disease is more likely to become epidemic in camps than in civil life, because of the greater difficulty of disposing of the excretions from the human body; third, the water carriage system was recommended for permanent camps, and where impractical, all fecal material should be disinfected and then carted from the camp; fourth, infected water was not an important factor in the spread of typhoid; fifth, flies undoubtedly served as carriers of infection; sixth, men carried infected material in their clothes or on their persons and thus disseminated the disease; seventh, it is probable that the infection was transmitted to some extent through the air in the form of dust; eighth, the shortest period of incubation in the disease is probably something under eight days. The final re-

port prepared by Vaughan as sole survivor of the commission has paved the way for improvements in sanitation which have virtually eliminated typhoid as a serious disease in military life.

During the Civil War it was first realized that science could be of service in war as well as in peace and the National Academy of Sciences was chartered by Congress in 1863. This became a self-perpetuating body, selecting its own membership, receiving no financial aid from the Government but yet ready at all times to be at the command of the President or Congress. As Dr. Vaughan has stated, the Academy was entrusted with the solution of problems ranging from "the preservation of paint on army knapsacks" to "the protection of iron vessels from rusting." During peace, committees have on request given advice on an equally wide range of subjects. At the annual meeting in 1916 the Academy tendered its service to President Wilson and this was immediately accepted. A committee of members of the Academy was appointed and christened the National Research Council, having authority to enlarge its membership from the scientists of the country. In very short order, the scientific forces of the country were mobilized and began to work in unison, not as preparation necessarily for the oncoming war but as preparation for any immediate emergency. As a member of the executive committee during 1916-17, Dr. Vaughan made frequent visits to Washington and New York, though the organization had as yet no official standing. It is true that the President had in 1916 appointed a council of National Defense, but at the time there was no connection. During this period many subjects were discussed with General Gorgas and his staff, largely pertaining to advancement of the care of soldiers in camp and at battle; likewise it was found that digitalis could be utilized from that growing wild in Oregon and Washington, and that satisfactory surgical needles could be made in this country. On February 28, 1917, the Council of National Defense invited the Research Council to cooperate with it in scientific matters.

Came the war—the National Research Council acted as the scientific component of the Council of National Defense. Dr. Vaughan entered the World War with the rank of Major and was assigned to duty

with the medical division of the Research Council, where he continued his work as given above, and likewise served on the very important committee which scrutinized the qualifications of the numberless applicants for commissions in the Medical department. "In August, 1917, he was relieved from duty with the Defense Council and assigned as head of the Communicable Disease Section of the Division of Sanitation in the Surgeon General's office. In this position he had immediate supervision over the current reports of communicable diseases from all the camps and hospitals in the United States, compiling statistics, analyzing data and investigating methods of disease prevention." During 1918 he made many sanitary inspections of the various camps and rendered valuable service by his suggestions as to the prevention and treatment of the epidemics which were sweeping the camps. Doctor Vaughan was promoted to the grade of Lieutenant Colonel in February, 1918, and to the grade of Colonel in April, 1930. His worth to the country was recognized by the award of the Distinguished Service Medal, which was made with the following citation:

"Colonel Victor C. Vaughan, United States Army. For exceptionally meritorious and conspicuous service. During his service in the office of the Surgeon General his contributions of advice and information have been of great value to the Army in connection with the control of communicable disease. During the recent epidemic of influenza, in particular, his work was of extreme value."

In appreciation of his services to the Allied Cause, the Republic of France honored him with the decoration of Chevalier of the Legion of Honor. It should be mentioned at this time that the five sons of Dr. and Mrs. Vaughan all enlisted and rendered valuable service. The eldest, Major V. C. Vaughan, Jr., lost his life shortly after the war was over while bathing in the river Cher.

In 1921, at the age of seventy, Dr. Vaughan resigned from all duties and functions at the University. In September of the same year he took up the duties of the chairmanship of the Medical Division of the National Research Council, which position he held one year. In 1922 Dr. Vaughan temporarily moved to Chicago, where he assisted in launching the journal *Hygeia*, which has been continued since under the auspices of the American Medical Associa-

tion. During this same year and the following were published the results of Dr. Vaughan's completed work in Epidemiology in the form of two tremendous volumes entitled "Epidemiology and Public Health." These volumes not only provided a compendium of knowledge with respect to disease prevention but contain many specific recommendations for improvements in Public Health Administration which will be attained only in years to come. In September, 1925, Dr. Vaughan again assumed the duties as chairman of the Medical Division of the National Research Council. In 1926, Dr. Vaughan in company with Mrs. Vaughan attended a Medical Congress in the Orient, visiting China, Japan and the Philippines. On his return in the Spring of 1927 he suffered a mild apoplectic seizure from which he fully recovered, but which terminated his active work. His death occurred at Richmond, Virginia, where he was suddenly stricken with a heart attack November 21, 1929.

HONORS AND PUBLICATIONS

It is impossible to enumerate in entirety the honors which were bestowed upon Dr. Vaughan. Most prominent are the following: In 1897 he was made an honorary Doctor of Science by the University of Western Pennsylvania. Four times he received the honor of the degree Doctor of Laws, the highest honor that can be conferred by an institution of higher learning. He received this degree from the University of Michigan in 1900, Central College in 1910, Jefferson Medical College in 1915 and from the University of Missouri in 1923. An unusual honor was the conferring on him of the honorary degree of Doctor of Medicine by the University of Illinois in 1894. For thirty-six years he was President of the Michigan State Board of Health, and for thirty years was Dean of the University of Michigan Medical School. Dr. Vaughan

served as President of the American Medical Association in 1915-1916, and for many years remained a member of its council on Medical education. He was a member of the Association of American Physicians, being its president in 1908; he was likewise President of the American Tuberculosis Association in 1919. Dr. Vaughan was a member of the National Academy of Sciences, the French Society of Hygiene, the American Philosophical Society and several other learned societies. In 1928 he received the Kober medal of the Association of American Physicians for outstanding contributions to his profession. The military citations have already been mentioned. His contributions to medical literature are too numerous to mention, being represented by about two hundred fifty articles and seventeen books, some of which have gone through several editions.

For the past several minutes I have been attempting to present a picture of the contributions of a true scientist; it would be unjust should I fail to speak of Victor Vaughan as a man and the truly great personality which his was the fortune to be. By inquiring carefully we learn that his civilian life fairly sparkled with those attributes we call ideal; the name of Vaughan, like that of Angell, has perhaps become a synonym for beloved traits of character, in Ann Arbor. He could always take time out for communion with his friends; considerate and impartial he wisely gave of his counsel. At home the Vaughans were visited by the noted and the humble—their doors were open equally to both. His heart beat for the University and Ann Arbor, he had watched them both grow, was identified with that growth; he loved their pasts and was yet proud of the prospect of the future. Dr. Novy has said:

"By his students he was loved and respected and to his colleagues who knew him best he was a man—honest, upright and sincere, whose every effort had as its objective the good of the University, which he loved as long as he lived."

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JUNE, 1932

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon

EDITORIAL

POST-GRADUATE MEDICINE

The fourth annual practitioner's course in medicine and surgery and the surgical specialties under the auspices of the Department of Post-Graduate Medicine of the University of Michigan, will begin in Detroit June 6th and continue until June 18th. The different lectures, clinics and clinical demonstrations will be held at Harper, Grace, Henry Ford, Providence, Children's, Herman Kiefer and Receiving Hospitals. As stated in the prospectus, emphasis will be placed on the degenerative diseases, their

contributing factors, early recognition and methods of control, particularly as related to general practice.

A perusal of the program informs one of a variety of subjects, including allergic and cardiac diseases, nephritis, diseases of the bile passages, diabetes and tuberculosis. Some phases of pediatrics are also included. The program also offers special courses in proctology and in gynecological pathology. Full information regarding these practitioner's courses may be obtained by writing the Department of Post-Graduate Medicine, University Hospital, Ann Arbor.

In the general news section of this number of the Journal is also announced a one-day clinic to be given by the Alumni Association of the Detroit College of Medicine and Surgery. Attendance at this clinic will well repay any whose time is not already preempted by registration and attendance on the two weeks' Post-Graduate Clinic.

We have stressed from time to time the importance of post-graduate studies. The annual practitioner's courses as offered this year afford an opportunity to acquire a knowledge of the latest developments in the various subjects treated. A movement has been inaugurated by some county societies, notably the Wayne County Medical Society, to extend the matter of physical examinations to include as many of the laity as care to avail themselves of the opportunity. No better preparation on the part of the profession for such an undertaking can be had than the annual two weeks' study. Come with notebook in hand and an inquiring as well as receptive mind and you will have the most profitable two weeks of the year.

COUNTY COMMITTEES ON MEDICAL ECONOMICS

The great economic changes we are now undergoing have caused most of us to realize that we have entered a new era. It is now incumbent upon us to adjust our manner of living to conditions as they now exist. We need a new measure of values; we must not lose our perspective; we offer a service that is absolutely necessary to the well being

of our fellow citizens. We believe that the laborer is worthy of his hire, but we have never denied this service to those who could ill afford to pay for it.

We are not trying at this critical time to shirk nor to evade our responsibilities, but this is a most opportune time for every County Society to name a committee on Medical Economics, to study their local problems, and to help solve those of the State and Nation, and I earnestly urge each and every one of our competent Societies to bring this matter up for discussion at their next meeting.

We have the educational background, the economic intelligence, and the sympathetic spirit of fairness so necessary in dealing with so vital an issue.

Never in the history of medicine has it been so essential that we have the whole-hearted coöperation of the entire profession.

The public looks to us for guidance in matters pertaining to health and health education and its many ramifications, and I am of the firm belief that great good will come from an honest and sincere effort on your part to study these problems in a calm and dispassionate manner.

CARL F. MOLL,

President, Michigan State Medical Society.

THE SOCIAL TRAINING OF THE PHYSICIAN AND SURGEON

This is the title of an interesting paper by Dr. W. J. Mayo of Rochester, Minnesota, in a recent number of the *Clinical Bulletin*, the weekly publication of the Mayo Clinic. Dr. Mayo's long experience as a surgeon and his intelligent contact with a large number of human beings entitles him to a hearing on any subject. We are, however, interested in obtaining his ideas in regard to the social training of members of our profession. He begins by recalling that the emotions are the result of instinctive reactions concerned with food, sex and fear. In civilized communities the problems of food and sex are fairly well under control, but fear even in this day of well organized protection sometimes overcomes intelligence. Even well trained physicians at times show little regard for the emotional reaction of patients. Dr. Mayo goes on to express his belief that success in the practice of medicine depends to a large extent on the understanding of human emotions. The

physician who is able to inspire his patients with confidence is often successful over him who is more scientifically trained. He even goes on to say that one of the years devoted to pre-medical work in college might be given over to social education to the advantage of the physician. A training which in the long run would be of greater service to him than schooling in some of the subjects that are comprised in the pre-medical curriculum.

The surgeon, says Dr. Mayo, should ever have in mind the desire of the patient to look well, hence we have an argument in favor of cosmetic results in plastic surgery of the face or in operations of the thyroid gland. Dr. Mayo goes on to mention operations in which the result from the esthetic viewpoint should also receive consideration. In operations on the large intestine, a permanent colonic stoma should not be undertaken without weighing carefully the chances of cure by some method that will permit the normal control of the bowels. "Why perform colostomy in a case of hopeless carcinoma," says he, "unless obstruction or relief of pain makes it necessary?" And he continues, "prolongation of life must come first and comfort and intestinal stability second, but all surgical procedures should be carried out as far as possible with deference to the emotions of the patient, which so frequently are concerned with social conditions and environment. Every person has a right to feel normal as well as look normal."

Dr. Mayo has been observant in regard to the factors in the success of members of the medical profession and concludes "that success depends more upon imponderables than on those things which can be weighed and measured."

THE EIGHTEENTH AMENDMENT

The Literary Digest has completed a second vote on the prohibition amendment to the Constitution within the past two years. The number of April 23 contained a summary of the vote particularly as the result of the poll among bankers and professional men of the United States. The clergy are first in their support of the eighteenth amendment but show a decline in their support contrasted with the poll made in 1930, a difference of 2,939 in favor of repeal in the vote within two years. The bankers are

next to the clergymen in support of prohibition, but in their case, too, there is a difference in favor of repeal contrasted with the 1930 vote of 9,102. In the year 1930, 19,956 physicians voted for enforcement and 32,235 voted for repeal. In the year 1932, 14,770 voted for a continuance of the prohibition law, while 60,229 voted against it. In regard to the legal profession the statistics are as follows: in the year 1930 the vote favorable to the amendment was 18,101, for repeal 34,886. Compared with this the vote in 1932 stood 12,736 for continuance and 52,561 for repeal.

This poll may be taken as a fair cross section of professional opinion in the United States and if we are to judge therefrom there is no question but that sentiment in favor of the eighteenth amendment is slowly but surely losing ground.

Coming to our own state, a total vote of 166,217 is recorded, of which number 130,288 ballots favor repeal of the eighteenth amendment. Of professional men in Michigan the straw vote is as follows: bankers for repeal 1,667, for continuance 633; clergymen for repeal of the eighteenth amendment 1,173, against repeal 270; of physicians 1,533 votes are recorded in favor of repeal; for continuance of the amendment 388. There is no question as to the change of opinion against prohibition as it has been carried on during the past decade. No doubt its failure to meet the expectations of thousands of its advocates has been due to insufficient public sentiment behind the enforcement of the law. We are not getting the thing many of us voted for twelve years ago, though the price of enforcement has in dollars and in loss of revenue from license been enormous.

Whatever method may be suggested for producing sobriety, temperance training has its claims. In the struggle for existence demanded today a clear head is necessary. Probably, however, the most effective method of curtailing the liquor traffic is to tax it. *The power to tax is the power to destroy.* During two visits to tax-ridden western Europe within the past six years the writer recalls seeing only one inebriate person. It is high time that an attempt were made to come to some decision in the light of changing public sentiment and a decade of experience, and the sooner the old and true, slow but sure, methods of temperance reform are resumed the better.

COMMERCIAL X-RAY LABORATORIES

It would seem scarcely necessary to warn members of the medical profession concerning the patronizing of X-ray laboratories operated solely by laymen. We know of no member of the medical profession who does so. However, it is a frequent thing for patients to consult commercial laboratories independently, have radiographs made and take the radiographs for which they have paid the operator, to a physician to show him what is the matter with them. To the average layman a radiograph is simply a picture.

"There is my chest or my stomach," or whatever the anatomical part may be.

"Now doctor what is the matter with it?"

Of course it goes without saying that an X-ray film of a chest or any other part of the human anatomy, in the majority of instances, means practically nothing unless accompanied by interpretation by an experienced roentgenologist. The commercial X-ray laboratory is as much out of place in modern medicine as any other medical specialty carried on by untrained laymen. The work of the commercialized X-ray laboratory consists in the making and selling of films to its patrons. No fluoroscopic observation is made and no written report as a rule is given out, which further points to the deficiency of the practice.

It is in the interests of not only medicine as it should be practised, but of the laity also, that the prostitution of any diagnostic method to commercialism should be severely frowned upon. The commercial laboratory is beyond the control of organized medicine, therefore organized medicine would do well not to recognize the work of free-lance technicians, but should insist that X-ray examinations be made entirely under competent medical supervision accompanied by definite written reports of the conditions found.

VITAMIN C ISOLATED

Dr. C. G. King of the University of Pittsburgh announced at the annual meeting of the American Biochemical Society at Philadelphia that he had isolated the antiscorbutic Vitamin C. Vitamin C is present in the juice of the orange and lemon as well as in cabbage. Dr. King was able to crystallize out the vitamin and test the results by ex-

perimenting on guinea pigs. The significance of the isolation of the vitamin is not important so far as human beings are concerned, since the fact of its presence in orange and lemon juices has been long well known. The value of the research according to the scientist lies in the fact that Vitamin C may be chemically analyzed and synthesized in the laboratory and produced commercially.

Just imagine, the housewife may now go to the grocer (we presume that brand of merchant will handle the product) and purchase an ounce or a pound of Vitamin C (depending upon the cost of production or isolation) and said merchant will have something tangible to sell rather than a fruit that is presumed to be rich in the hitherto illusive food principle. And vision the dapper grocer's clerk on the billboard advertisements on one side of the counter displaying the shining crystals of Vitamin C to a bride who is on her first housekeeping foraging expedition.

FIFTY YEARS SINCE DARWIN'S DEATH

It is half a century since Charles Darwin, the great naturalist, died. Darwin was educated to be a physician, but on account of ill health early in life did not practice his profession. It is said of him that during the last forty years of his life he was unable to undertake work that required any sustained effort of more than two hours a day, yet what he accomplished was simply enormous. A basis for his studies was his cruise on the *Beagle* (graphically told in his *Voyage of the Beagle*) which lasted for five years and supplied him with botanical and other data sufficient for many years of study. In 1859 appeared "The Origin of the Species," which, it is almost trite to say, is one of the outstanding works of all time on a biological subject. Darwin's work from the first has been of interest to the medical profession, and it is a significant fact that his old home at Down, Kent County, England, has been secured as a Darwinian museum through the munificence of a prominent British physician. Commenting on the fiftieth anniversary of Darwin's death the *New York Times* published the following editorial.

"Charles Darwin died fifty years ago. He had the distinction of having stirred the soul of man so

profoundly that the whole trend of thought was changed. With the publication of "The Origin of Species" religion was confronted with a theory of life and man's place in the universe that could not be ignored; art turned from romanticism to realism, with such loose thinkers as Zola interpreting human relations as manifestation of the struggle for existence; Buckle and Taine wrote history around the Darwinian principle; democracy found evolution confirming its own belief in the individual's right to assert himself; Nietzsche's Superman transmuted the ruthlessness of nature into a creed. "Evolution," Spencer's variation of Darwin's "descent with modification," has become an overworked catchword. Society evolves. So do poets and statesmen, eggs and buds, nebulae and stars, and so does the universe as a whole in these Einsteinian days.

"Where does Darwin now stand in biology? Reputations have been made by correcting his supposed mistakes. After deVries had proved that new species may arise suddenly by mutation and Mendel's laws of heredity were rediscovered in 1900 it seemed as if Darwin were superseded. But on further investigation it appeared that the large, sudden mutations or jumps by which new species are sometimes created are special cases of which nature disapproves. Research conducted within the last decade has shown that almost imperceptible mutations are the ones that count in evolution, and that by selection their direction and preservation are determined. So we come back to Darwin's own Darwinism. Lastly there is the evidence of fossils. When Darwin wrote "The Origin of Species" not a single complete evolutionary series was known. Now we have not only the classic example of the horse, but long lines of elephants, snails, titanotheres, to mention but a few. Natural selection still decides what shall live and what shall die. Geneticists have modified it, but it remains the only rational theory that accounts for the origin, distribution and relationship of living organisms—a magnificent generalization which may be compared in its sweep with the Newtonian conception of gravitation and which remains the towering contribution of the last century to science."

LOGIC

The following extract is from a new book entitled *The United States in World Affairs* by Walter Lippman and William O. Scroggs. It is here printed with permission of the publishers, Harper and Bros., New York. The extract is not medical in a technical sense but we would like to meet the doctor who either from economic necessity or choice is not interested in the subject with which it deals. We have here presented eleven *logical* deductions that must follow an economical and social condition characterized by lowered prices, paralysis of trade and production, with consequent unemployment.

Broadly speaking, it may be said that when there is a fall in prices, a recession in trade, a decline in production, and the subsequent unemployment and reduction of incomes,

(1) The revenue from all kinds of taxation is cut down.

(2) The contractual obligation of the state, in

the form of debt charges, remains stationary in terms of money, but, owing to a fallen price level, actually increases in terms of purchasing power.

(3) Another large part of the state's expenditure, such as money devoted to pensions, military and civilian salaries, and various grants for social services, can be reduced only at great sacrifice or at great political risk.

(4) Unemployment and distress create demands for emergency expenditures. (The dole.)

(5) Thus declining revenues, stationary obligations, and increasing demands continue to produce budgetary deficits.

(6) These deficits must be made good either by (a) increased taxation, or by (b) decreased expenditures, or by (c) borrowing, or by some combination of the three methods.

(7) A failure to meet the deficits by one or all of these methods must produce a withdrawal of gold from the central banking system, and, when this is exhausted, a default on contractual obligations, and a devaluation of the national currency.

(8) A devaluation of the national currency is tantamount to a reduction of the value of all fixed incomes and a partial repudiation of all public and private debts that are payable in terms of the national currency.

(9) The spectacle of a serious deficit which is not being covered by taxation or economy must shake the credit of any country without superabundant supplies of liquid capital. The threat of default or devaluation causes a flight from the currency by domestic and foreign investors seeking a safer currency in which to preserve their capital.

(10) A panic of this sort, involving, as it does, the withdrawal of gold and a consequent restriction of credit, aggravates still further the domestic economic crisis by curtailing imports, increasing the cost of financing business, diminishing profits, reducing production, enlarging the army of the unemployed, increasing the cost of relieving them, and reducing the yield of taxes.

(11) At this stage the domestic situation becomes inevitably a matter of international concern. For in such a breakdown of its economy a nation can no longer assure the fulfillment of its international obligations. The unsettling of all existing relationships between prices, costs of production, incomes, and debts, unsettles the existing adjustments among sections of a country and among the different economic classes of its inhabitants.

PERIODIC HEALTH EXAMINATION

Within the past decade many of our cities have undertaken special services which the economic conditions prevailing up to the autumn of 1929 seemed to warrant. In Detroit itself, it is said that approximately one hundred activities were undertaken which did not exist prior to 1916. All this required financing. With the depleted condition of the city treasury of the present time many useful services will have to be sacrificed. Many examples might be given. One of the most important that cannot be sacrificed without grave detriment to the municipality consists of health service rendered in the past. The public health committee of the Wayne County Medical Society has

never been more active than at present. It is doing everything in its power to restore to the rank and file of the profession some of the services which at one time were performed with greater or less efficiency by the individual doctor. The school health inspection service will be taken over and carried on by the medical profession as a means of safeguarding the health of the younger members of the community. There is also being launched a concerted movement to emphasize the matter of periodical health examinations for adults. It behooves every member of the profession, and particularly each person in general practice, to equip himself for this work. The details of the movement we hope to publish in the next number of this Journal.

Through the leadership of the Public Health Committee of the Society the profession have taken a leading part in the anti-tuberculosis campaign and diphtheria immunization. The committee has coöperated with the Detroit Dermatological Society and the Detroit department of health in the matter of referring patients with venereal disease for care to the members of the Society. It has also arranged for a representation of the Society on district relief committees. In the matter of making periodic health examinations the committee has the coöperation of the Detroit Board of Commerce.

A BIT OF MEDICAL HISTORY

CLAUDIUS GALEN

We have mentioned the post-Hippocratic sects or cults which consisted for the most part of an exaggeration in different directions of individual medical ideas. There was advancement of medical knowledge since the time of Hippocrates, but there was no integrating bond, no synthesis, which could select the true from the false. The need was for "a man strong in action, clear of thought, a scholar to know, a critic to judge the whole range of science and art."* It was not, however, until the second century of the Christian era that such a man appeared in the person of Galen. "In him Greek medicine attained not only its second climax but its final conclusion in theory and knowledge." And to put it tersely, "The healing *art* of Hippocrates was transmitted and transformed into the healing *science* of Galen."

*History of Medicine, Vol. I, Max Neuburger.

The known facts of Galen's life are few, but this is also true of numerous other personages who have influenced thought and action. Galen was born at Pergamos in Asia Minor in 130 A. D.† He received his early training from his father, Nikon, who was an architect, well educated in mathematics as well as in mental and natural philosophy. Galen was early impressed by his father's wisdom but appears to have reacted differently towards his mother. "I was blest," said he, "with a calm, just, gallant and sympathetic father, whereas my mother was of so irritable a temper that she would at times bite her maids, and was forever screaming, and quarrelling with my father, worse than Xantippe with Socrates." The father evidently did not believe that a rose by any other name would smell as sweet, for he chose a name for his son which signified the characteristics he most desired in his offspring, *Παλῆνος*, which meant calm, peaceable. However, as much as he admired his father, he inherited the choleric temperament of his mother.

At the age of fourteen Galen began the study of philosophy, which he found of great interest, and at this early age he resolved to devote his life to philosophical studies. Influenced by a dream of his father's, supposed to have been inspired by Æsculapius, the son at the age of seventeen decided that henceforth medicine would be his major interest. It is of interest here to recall the remark of Sir Thomas Browne of "Religio Medici" fame: "We owe unto dreams that Galen was a physician, Dion an historian, and that the world hath seen some notable pieces of Cardan." He began to observe interesting cases of disease, even asserting his independent judgment in opposition to authority and entered upon the study of medicine in earnest in 147. Galen was given much to travel in the pursuit of knowledge. He visited Greece, Phoenicia, Palestine, Crete and finally the famous school of Alexandria, and eventually located in Rome in 164, where he soon became acquainted with many of the chief officials of the state, some of whom attended his lec-

tures and demonstrations. He opposed bitterly the numerous healing cults that had sprung up since the time of Hippocrates. He was the prototype of the modern regular physician.

* * *

After nine years of wandering, during which time he appeared to have derived most from his sojourn at the Alexandrian School, together with his own independent observations, Galen returned to Pergamos, but did not long remain there. He left his native city and went to Rome to seek his fortune. His precocity is manifest in the fact that at the age of twenty-one he had written an anatomy of the uterus for midwives, a work on the diseases of the eyes and a treatise on respiration. His health was at times much below normal. He suffered from fevers, a condition which compelled him to adopt a rational mode of living, particularly in the matter of diet.

In spite of his personal popularity at Rome, for, as we have seen, he was sought after by the leading citizens as well as the rulers, he labored assiduously in the cause of science, and here during his busy career several of his greatest works on anatomy and physiology appeared. Roman medicine up to and during the second century A. D. was of a very low standard. It was sectarian in the extreme, and the various cults vied with one another for popularity by slandering the others. Such were the conditions with which Galen found himself surrounded. Naturally the numerous medical cults turned against him as he was accorded the favors of the great. The choleric inheritance from his mother stood him in good stead. He showed up the weakness of his antagonists and ridiculed the principal schools of his time. Fearing assassination, Galen left Rome as a fugitive after four years. His departure was coincident with the great plague that visited Rome in 166 A. D. The fact that he left the city at such a time brought down upon him the reproach of cowardice.* This plague, however, did not exhaust itself until fifteen years had passed. His journey to his old home was slow, during which time he visited various places, gaining information regarding medicine plants and minerals. After a brief so-

†The date of his birth has also been given as 129 A. D. (Sir Clifford Allbutt) and 131 A. D. by others.

Note: Associated with the Galenic period we have Rufus of Ephesus, about whom little is known. He studied at the Alexandrian School and is accredited with the first work on anatomical nomenclature. He is said to have been a physician of the Hippocratic type, a man of large experience, and exactness of method. Four works survive, on Diseases of the Bladder and Kidneys; Names of Various Parts of the Body; on the Gout, and on Purgative Remedies.

*Dr. Joseph Walsh (Annals of Medical History, March, 1931, Vol. 3, No. 2) has written a lengthy paper refuting the charges of cowardice made against Galen. This paper, which is well documented, is a convincing acquittal.

jour at Pergamos he was requested by the Emperor Lucius Verus and Marcus Aurelius to return to Rome to serve as military physician. Verus had in the meantime become a victim of the plague. Galen managed to persuade Marcus Aurelius that he had been told by Æsculapius in a dream that the Emperor should excuse him; as a result a compromise was effected whereby he remained in Rome entrusted with the medical care of the Emperor's son Commodus.

* * *

Galen accepted the teaching of none of the schools of his day, but looked upon himself as a true follower of Hippocrates. In anatomy he was a disciple of the Alexandrian school, but he was denied the opportunity of dissecting the human body as the Alexandrians had done before him. He lived in an age of prejudice against what was looked upon as desecration of the human body. His dissections were made on the carcasses of apes and pigs. He wrote a valuable book on osteology, "De Ossibus," which Osler declared "could, with very few changes, be used today by a hygienic class as a manual." Corner* says that among the works of Galen which have survived the centuries there is enough anatomy to make a volume about half as large as Gray's "Anatomy." "A pupil," continues this writer, "who read these books in the order recommended by their author would take a graded course in anatomy and physiology; first the bones for beginners, then the manual of dissection, then on the natural faculties, and finally "The Action of Muscles." He was not only a skilful anatomist but also a surgeon, since at the age of twenty-nine he was appointed surgeon to the gladiators of his native Pergamos. Galen, according to Corner, was not very systematic; he was repetitious, inconsistent and at the same time very positive in matters of opinion. Sir Clifford Allbutt's estimate was to the effect that he was a man of enormous industry, great sagacity and unbounded fluency.

* * *

The physiological research of Galen was even more important than his anatomical studies. He has been referred to as the earliest to employ the deductive method and the first to perform experiments on an extensive scale. He was the founder of ex-

perimental physiology. Galen showed that the arteries contained blood and not air, as his forerunners and contemporaries had assumed. He studied the movements of the heart and its valvular action, and almost lit upon the discovery of the circulation of the blood. He also experimented upon nerve roots and segments of the spinal column and the visceral sympathetic, ascertaining by section the effects upon costal and diaphragmatic respiration, control of bladder and rectum and cutaneous sensation. Galen was the first to make a distinction between motor and sensory nerves. The motor nerves controlled the muscles as "Chariot horses are managed by reins." He also described seven pairs of the cranial nerves, and demonstrated the contractibility of muscle.

Apart from his studies in anatomy and physiology his views on what may be designated Greek medicine were those of Hippocrates, with refinements. He had great faith in drugs and studied while on his extensive travels about the Mediterranean countries those plants and minerals which might form the basis of drugs. Galen differed from his great prototype in the fact that he was "heavily pharmaceutical." He was constantly on the lookout for specifics. He was *heteropathic* rather than homeopathic. His principle was cure by contraries and his drugs were classified by four qualities—hot, cold, moist and dry. He accepted the four elements and the four humors and constructed an elaborate system of crases and dyscrases, concoctions, complexions and temperaments by his various combinations of elements and humors. With Galen's theory of temperaments and Hippocrates' doctrine of humors, health depended upon the eucrasia; disease upon a faulty crasis or distemper. The words, "choleric," "sanguine," "melancholic" and "phlegmatic" were not introduced, however, until the ninth century and then by the Arab school. Galen stressed the importance of treating the individual rather than confining the attention too closely to the lesion or disease, an attitude that is very modern.

* * *

Unfortunately he lived at a time when his logical system failed to stimulate thought in others, but gave rise to futile bickerings and discussions by his successors. He became an authority or a substitute for thinking. The price we pay for our great men,

*Anatomy, Clio Medica, Corner.

says Allbutt, is that later generations make tyrants of them. The heresy of one age becomes the orthodoxy of the next and in the absence of new heresies mankind suffers.

Greenhill has divided Galen's works into seven classes, as follows: (1) Anatomy and Physiology; (2) Dietetics and Hygiene; (3) Pathology; (4) Diagnosis; (5) Works on Pharmacy and *Materia Medica*; (6) Therapeutics, Including Surgery; and (7) Commentaries on Hippocrates.

According to Meyer, Galen was for Rome an episode; for the middle ages an epoch. In addition to the permutations of elements and humors, he taught the strictum and laxum of the Methodists, whom he despised. Yet after all, declares Allbutt, he was the greatest master of the scientific method from the second century to Roger Bacon (1214-1292).

In comparing Hippocrates and Galen I offer the following paragraph from Cumiston.*

"Hippocrates possessed to the highest degree the genius of patient observation, methodical reasoning and prudent generalization. He first observed, afterwards reasoned and wisely generalized. Galen, on the contrary, with his brilliant audacious mind, impatient and quick, generalized without waiting to observe, and built castles in the air. His theories and systems, based on few or even incompletely observed facts, lacked a solid foundation. Attentive and judicious, Hippocrates followed step by step the processes of nature, verifying them by observation. Galen proceeded more boldly; impatient of restraint, he could not bear opposition. . . . Centuries have respected the doctrine of Hippocrates, but have completely destroyed Galen's system of medicine."

There is consistency in the apparent inconsistencies of the various evaluations of the man and his work. Though separated by about six centuries, Hippocrates may be regarded as the "Darwin," and Galen the "Huxley" of Greek medicine. One was the calm student, the other the polemic defender of the faith. Had Galen appeared in a different age—an age of intellectual virility—his work might have been short-lived. He was born, however, at a time when men looked for a guiding hand rather than an opportunity to display initiative.

Galen was such a prolific writer that it is estimated he left over five hundred treatises, many of which have been lost. According

to Choulant there were 181 titles, of which 98 are presumed to be genuine, 19 fragmentary, 45 spurious, and 19 doubtful. Credit of preserving and transmitting a large portion of Galen's work must go to the Arabs. Galen was succeeded by Greek physicians of the Byzantine school, who simply copied and commented upon his work. The first Greek edition appeared in the year 1525. There is an English translation of Galen's book on *The Natural Faculties* in the Loeb Classified Library in which a page of Greek is faced by a page of translation in English, which gives one a good idea of Galen's style and thought.

* * *

Besides Hippocrates, who perhaps exerted the greatest influence on him, Galen studied and was greatly influenced by the writings of Aristotle. These were his two great masters, who in reality supplemented each other. Aristotle satisfied his longing for ascertaining the reason of things. Aristotle held a belief in a God by whom the universe was designed. Doubtless the influence of Aristotle, whose philosophy was adopted by the church through the middle ages, aided in prolonging the influence of Galen well into the seventeenth century.

Galen was a monotheist in religion, though not a member of the Christian Church at Pergamos. Dante accords him a place in the *Inferno* in the first circle among those who lived without either baptism or Christianity. He seems, however, to have been in very good company, for with him Dante places Socrates, Plato, Euclid, Ptolemy, Aristotle, Hippocrates and the Arabian physicians Avicenna and Averrhoes. Regarding his own works Galen wrote:

"In writing these books I compose a true and real hymn to that awful Being who made us all; and, in my opinion, true religion consists not so much in costly sacrifices and fragrant perfumes offered upon His altars, as in a thorough conviction impressed upon our minds, and an endeavour to produce similar impression upon the mind of others, of His unerring wisdom, His resistless power and His all diffusing goodness."

Galen died in 201 A. D. His work survived him until the sixteenth century, when it became obsolete in the discoveries of Vesalius and Harvey. His contribution of the experimental method still lives.

*An Introduction to the History of Medicine by C. G. Cumiston.

THE TOTING O' HIS TRAY

Dae ye min' me tellin' something o' th' funny things
 ah see
 'boot th' people wha are gaitherin' where ah happen
 for tae be,
 It may be th' mornin' aifter, or th' feedin' time o'
 day,
 But it's fun tae see th' fat man a totin' o' his tray.

He sits him doon in comfort, wherever he may
 squeeze,
 But he loses his composurc if at a' he has tae
 sneeze,
 An' its rough an' tumble tackle tae save his facial
 map,
 When his soup gaes tumblin' doonward tae th' mid-
 dle o' his lap.

They're maistly verra snappy in th' feedin' o' their
 face,
 An' its nae sae verra aften that they say a word o'
 grace,
 But when a lump o' butter spreads itsel aroon' his
 wais',
 Th' words he utters tae himsel are heard about th'
 place.

Ah weel, Guid Nicht.

WEELUM.

INCREASING MOTOR FATALITIES

(New England Medical Journal)

Drivers and pedestrians alike, according to the *New York Times*, would be more circumspect if they read the text and diagrams of the Travelers Insurance Company's report of motor vehicle accidents in 1931. This report emphasizes the tremendous importance of the minor decision which both driver and pedestrian are so frequently called upon to make. Our inefficiency as motor-car drivers, according to George R. Wellington, Rhode Island Commissioner, is responsible for our serious accident problem, and Commissioner Eynon of Pennsylvania gives as his opinion that traffic safety is ninety-five per cent education and five per cent enforcement.

Our motor vehicle casualties are compared impressively with the casualties of the World War, in eighteen months of which 50,510 members of the American Expeditionary Force were killed in action or died of wounds, and 182,674 were wounded. In the eighteen months ended December 31, 1931, 53,650 Americans were killed in motor vehicle accidents and 1,576,840 were injured. Worse still, the fatalities of 1931 showed a 3.3 per cent increase over 1930, with a two per cent decline in registration of cars. This rise is considered to be due to increased speed. Pedestrian fatalities dropped more than three per cent, but deaths from collisions increased twenty-four per cent.

Further figures are brought out, such as the fact that more than twenty per cent of pedestrians killed were under the age of fifteen and that the annual economic loss is estimated at \$2,500,000,000 as compared to \$2,200,000,000 spent on public school education. Sunday, obviously, is the day of greatest casualties and the peak hour is from 6 to 7 p. m.

MEDICAL ECONOMICS

CAN WE AFFORD STATE
MEDICINE?

J. G. R. MANWARING, M.D.
 FLINT, MICHIGAN

PART IV

WOULD A GOVERNMENT MEDICAL SERVICE BE
THE BEST SERVICE?

"Ah, yes," Mr. Chesterton commented as he lighted a fresh cigar, "you were speaking of the panel system and state medicine?"

"The panel system is fatal. It is a fatal system. By it the country is divided into classes of masters and slaves. It is further a direct attack against the liberty of the poor, and though it is an attack in a conservative garb, it is none the less a menace."

"The panel system of medical practice or its allied systems is merely the delegation of the practice of medicine to a group of people in buttons."

"I am against people in buttons interfering with the rights of any man. The theory of the rational modern state is against bureaucracy. The dole is a tragic thing."

"So is any measure that metes out a perpetual interference with individual rights, and the free contacts of a citizenry. Which is exactly what the panel system of medicine does. It removes from a class of people the right to make free contacts for individual necessities."

"It is an evil thing when you classify and codify and put into a system of law a recognition of employers and employees as variant classes to be shown under any constitution. It is an evil thing to deprive the poor of the privilege of choice and to make of the people a sort of serfdom!" Gilbert A. Chesterton, an interview, December, 1930.¹

In addition to the extravagance and necessarily tremendous cost of such a service it would, like most services of the kind, be standardized, institutionalized and carry with it all the discomfort of red-tape.

It leads to malingering on a grand scale which the doctor must "aid and abet" for his own protection.

The physician is made a minor cog in a machine run by political appointees with all that goes with such a position.

There is a fundamental rule in business relations which always holds true, i.e., the best service is rendered to the one who employs you. It would seem that nothing yet proposed can take the place of the relationship of the physician and patient as we now have it. There is no service so satisfactory nor more appreciated by a patient than that for which he pays directly. Nothing fixes the responsibility of a physician to his patient so much as the knowledge that to this patient he must look for his pay. This relationship makes for courtesy, attentiveness, consideration and kindness in the care of the sick. To the patient these services are more apparent than special skill and are the things by which he judges. While to him they are inestimable he knows he can buy them with direct money payments.

In state medicine the finer relationships are not cultivated and are apt to be lost in large part though there are unusual men who always will establish them. Every physician who was in army service or

who has served in city clinics, dispensaries, et cetera, knows this to be so. Whether in industry, politics, or profession your primary responsibility is to the one who gives you your job. It will make a lot of difference to the patient whether he hires his own doctor or he accepts a political appointee.

How about the services themselves in a system of state medicine?

There will be two kinds of practice as now, office practice and institutional, or group practice.

Office practice of the contract type increases the tendency to superficial examination and consideration, invites an inordinate seeking of medical care and a corresponding pacifying distribution of unneeded medicines. With no keen personal interest in the patient, explanations and efforts at education will be lessened. Again, malingering will be highly developed and the physician will have to close his eyes to it so that he does not lose his following.

These are not imaginary but are developments in England as shown in numerous reports.

The physicians of the less ambitious type under such a system get a living and are satisfied. It is the patient who loses.

The other type of practice will be of the group kind. Group practice as we now have it has some curious developments. Private groups have the incentive that success depends on satisfaction given to its clientele.

But the division of responsibility, anywhere and always, lessens alertness.

"The idea that a staff of diagnosticians can make an examination of a patient, each in his own field and then somebody who has not up to then seen the patient can summarize the whole set of reports and make a diagnosis, is not only the most unscientific conception imaginable, but also one of the most dangerous. A diagnosis is a personal thing—an art as much as a treatment is. And diagnosis and treatment are continuous. One leads to the other."²

In many of our best hospitals a certain routine is followed. The prospective patient sees a clerk, is given an identification card, assigned to a department, is visited by an interne, and the interne takes a complete history, makes a physical examination and asks for a series of laboratory examinations. All this data is assembled, the interne indicates what his diagnosis is and then at last an appointment is made to see the chief or an assistant who is an expert. The patient is ushered into the august presence and is greeted breezily, and, if formally introduced, is given a warm hand shake. Then the chief turns his back on the patient and goes over the record carefully. Finally he turns to the patient again and states his diagnosis and gives whatever advice he has to offer.

The most important part of the whole procedure is taking the history and making the physical examinations. These are arts needing not only knowledge but long experience to acquire. The standard of work is set by the interne who is there precisely because he isn't good enough to practice yet.

The experienced expert's contribution is a hand-shake. It is only when the patient is a "big-gun" or something unusual is suspected that this routine is humanized and specialized.

If private clinics get this way, one can well understand what the routine would become in government run clinics. The only contact with the expert, the hand-shake, would be the first to go.

Students will question the efficiency of any kind of business run by democratic governments.

They likewise can well suspect the quality of service rendered by bureaus in a popular government.

If state medicine comes the sick will lose!

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GENERAL NEWS AND ANNOUNCEMENTS

Dr. Walter J. Cree of Detroit was recently appointed to the Medical Reserve Corps of the United States Public Health Service with the rank of surgeon.

The Genesee County Medical Society Bulletin has published a list of members who have been in practice a quarter of a century or more. They number fifty-two. Seven of this number have been in practice over forty years.

Dr. B. R. Corbus, Grand Rapids, Chairman of the Council of the Michigan State Medical Society, attended the annual meeting of the American Gastroenterological Society during the first week in May. The meeting was held at Atlantic City, New Jersey.

Dr. Gordon Richards of the University of Toronto addressed the Wayne County Medical Society on the subject "The Value of Roentgenology in the Diagnosis and Control of Treatment in Pulmonary Tuberculosis." This program was put on by the Detroit Roentgen Ray and Radium Society, May 3.

The election of officers for the year 1932-33 of the Northern Tri-State Medical Society at its 59th annual meeting at Toledo, resulted as follows: President, Edward B. Pedlow, M.D., Lima, Ohio; vice-president, G. O. Larson, M.D., LaPorte, Indiana; secretary, Edward P. Gillette, M.D., Toledo, Ohio; treasurer, H. F. Randall, M.D., Flint, Michigan; counsellors, Chas. Lukens, M.D., Toledo, Ohio; P. N. Sutherland, M.D., Angola, Indiana, and J. H. Andries, M.D., of Detroit, Michigan.

The Alumni Association of the Detroit College of Medicine and Surgery will hold a one day clinic on Wednesday, June 15. The Clinic will be conducted by the staff of the College. The forenoon will be spent as an operative clinic at the Receiving Hospital. In the afternoon at the College there will be a paper and a presentation on the subject of Electrocardiography by Dr. W. J. Wilson of Detroit. This feature will be followed by a lecture on Gross Pathology, together with an exhibition of specimens by Dr. James E. Davis, Pathologist of the College. A dinner will be held at the Book-Cadillac Hotel at 6:30 P. M. There will be a fee of \$3.00, which will cover the annual dues to the Alumni Association, the attendance on the clinics as well as the cost of the dinner in the evening. There will be a speaker of prominence at the dinner. Alumni of the class of '32 and all preceding classes at intervals of five years will hold their annual reunions.

The Wayne County Medical Society annual elections, which were held May 17th, resulted as follows: President-elect, Dr. A. W. Blain; Secretary, Dr. E. C. Baumgarten. Trustees, five year term, Dr. H. W. Plaggemeyer; one year term, Dr. H. A. Luce. Dr. H. Wellington Yates will take office as President of the Wayne County Medical Society on July 1st.

OBITUARY

DR. R. B. CANFIELD

Dr. R. B. Canfield, Professor of Otolaryngology of the University of Michigan Medical School, was the victim of an automobile accident early on the morning of May 12. Dr. Canfield is said to have been in the act of passing another car or a motorbus when his machine ran off the pavement near Ann Arbor, striking a tree. Death was almost instantaneous. He was born at Lake Forest, Illinois, in July, 1874. Dr. Canfield was educated and was graduated B.A. at the University of Michigan in 1897. He received the degree of M.D. in 1899. Following this he studied at the University of Berlin, Germany. He was Assistant Surgeon to the Manhattan Eye, Ear, Nose and Throat Hospital in 1904, also attending laryngologist in the New York City Clinic for laryngological tuberculosis the same year. In 1904-05 he was appointed clinical professor of diseases of the ear, nose and throat of the medical school of the University of Michigan. Since 1905 he has occupied the position of Professor of Otolaryngology. During the war he was chief of the surgical service Base Hospital No. 76 A. E. F. Dr. Canfield was a Fellow of the American College of Surgeons, a member of the American Otolaryngological Society, a member of the Washtenaw County Medical Society, Michigan State Medical Society and American Medical Association. The accident which caused his death occurred while Mrs. Canfield was in New York City, having accompanied her daughter east preparatory to a trip to Europe. Miss Barbara Canfield was about two days from New York in company with Dr. and Mrs. Furstenberg, en route to Naples.

DR. J. T. CRAMER

Dr. Jacob T. Cramer died at his home in Muskegon on April 5, at the age of fifty years. He had been in ill health since 1924, when he was compelled to give up active practice. Dr. Cramer was born in Muskegon, where he attended the public schools, completing his education at the University of Michigan and at Rush Medical College. He was appointed city physician in 1911 and county physician in 1917, holding each position for two years. Dr. Cramer is survived by his widow Clara and one daughter, Katherine. He was a member of the Muskegon County and Michigan State Medical Societies.

DR. GODFREY F. HAMLIN

Dr. Godfrey F. Hamlin of Oakland County died at Harper Hospital, Detroit, on May 5th. He was born in Ontario, February 20, 1866. He was educated at the Goderich High School, later attending the Michigan College of Medicine and Surgery, Detroit, from which institution he received his medical degree in 1896. The same year he located at Commerce, Oakland County, where he practiced until 1902, when he removed to Farmington. In 1907 he moved to Rochester, where he had continued in practice until his last illness. He was one of the early members of the Oakland County Medical Society. He is survived by his widow, Mrs. Ann Hamlin.

DR. JAMES E. MEAD

Dr. James E. Mead died on April 17 from pneumonia. He was born in Boston in 1873. Dr. Mead received his education in the schools of Detroit and graduated from the Detroit College of Medicine in

1899. Following his graduation he served as an intern in Harper Hospital. He was a contract surgeon with the United States army in the Philippines in 1902, after which time he returned and began practice in Detroit. Dr. Mead's interests were chiefly along the line of industrial surgery. He was connected with the Ford Motor Company from 1910 to 1920, and was chief of the medical and sociological departments from 1920 to 1929. He is survived by his wife and one son.

DR. THOMAS A. BAIRD

Dr. Thomas A. Baird, one of the best known physicians of Bay City, died at Mercy Hospital, Bay City, on April 27, after several months' illness. He was sixty-nine years old. Dr. Baird was born at Chesterfield, Ontario, and received his early education in the schools of his native place. He later matriculated at the University of Toronto but graduated in medicine from the McGill University of Montreal in 1885. He located in Bay City the year following his graduation, having continued his practice until his last illness, which began in December, 1931. Dr. Baird is survived by his widow; one son, Dr. F. S. Baird of Bay City; two daughters, Mrs. Thomas of Birmingham, and Dorothy of Ann Arbor. He was a member of the Bay County Medical Society, the Michigan State Medical Society and American Medical Association.

MECHANISM OF EDEMA IN RELATION TO CLINICAL CLASSIFICATION OF BRIGHT'S DISEASE (NEPHRITIS)

Henry A. Christian, Boston, found edema a very useful basis of classification of Bright's Disease along with a time division into acute, subacute and chronic. Using these criteria he has formed a clinical classification that has been very helpful. Properly to apply edema as one of the criteria of classification of Bright's disease or nephritis necessitates a reasonable understanding of the pathologic physiology of edema, and although the mechanism of edema is very complex and as yet far from thoroughly understood, recent investigation carried on in many different laboratories has added much to the knowledge of it, so that one is in a position so to formulate this knowledge as to aid in an understanding of the several types of Bright's disease. It is obvious that edema or the appearance of abnormal amounts of fluid in tissues and body cavities does not arise always from the same cause or, so to speak, does not always have the same mechanism. This permits one to subdivide edema into seven clinical varieties: cardiac, hepatic, renal, nutritional, anemic, inflammatory and anaphylactic edema. Of these varieties of edema, cardiac and hepatic edema have a very similar mechanism; in the same way, renal, nutritional and anemic edemas are closely related, as are inflammatory and anaphylactic edemas. In the mechanism of these several varieties of edema there are concerned six significant factors: filtration pressure, osmotic pressure, permeability of vessel wall, salt content of the tissues, lymphatic drainage and nervous control. The exact part played by each factor is not fully understood as yet, and, when they act in various combinations, great complexity may enter into the process. However, a reasonable understanding of the mechanism of edema may be obtained by analysis of the action of some of these factors in a somewhat schematic way. This relatively simple clinical classification is a practical, easily applied and useful grouping of patients with Bright's disease. Almost every patient can be placed properly in the classification after relatively simple clinical study. Hence the author commends its use.—*Journal A. M. A.*

COMMUNICATIONS

ANONYMOUS

Adrian, Michigan, April 15, 1932.

Carl F. Moll, M.D.,
President Michigan State Medical Society,
Flint, Michigan.

My Dear Dr. Moll:

In these strenuous times wherein the medical profession is going through a period of great distress, I think the time is quite opportune that you, as president of the Society, should exercise your efforts in curtailing expenses, starting with the executive officers down through the minor expense lists of doctors detailed to appear before the different county societies.

We have, as you know, a secretary who has enjoyed a munificent salary for many years which salary may have been the means of lessening his overhead expenses as far as his private practice is concerned. I am not criticising the present incumbent and wish you to feel that this is purely impersonal. But drastic measures should be adopted to lessen the burden of the struggling members of our profession.

I am sending this anonymous for reasons obvious to yourself, but feel that you as executive head of the Society should bend every effort to pare the cost of administration to the bone.

You are at liberty, and I wish you would publish this in our State Journal.

Very respectfully yours,
A loyal member of the State Society.

The above letter would be uncalled for if the writer read the State Journal. In the February issue, on page 164, he will note that the Secretary's salary has been reduced from \$6,500.00 to \$4,000.00 per year, a cut of nearly 40 per cent. The Editor's salary from \$3,500.00 to \$2,500.00 and other substantial reductions were made throughout the budget. These economies helped make it possible to give a 25 per cent reduction in our annual dues.

If every member would carefully read the minutes of each Council meeting, and the minutes of the proceedings of the Executive Committee of the Council, as published in the Journal, they would have a much more comprehensive understanding of our problems and the sane and efficient manner in which they are met. It would give them a broader and more sympathetic viewpoint, with the efforts the Council are exerting on their behalf.

It has been said that leadership can hardly develop and be effective unless the rank and file are properly informed and they will only be informed when they seek information and expend some effort of their own to get it.

Your officers invite constructive criticism, but no criticism can be constructive unless all the facts are known and carefully weighed.

CARL F. MOLL, *President.*

SOCIETY ACTIVITY

A. M. A.—NEW ORLEANS

The 1932 session of the American Medical Association in New Orleans is now history. Our six Michigan delegates were in attendance. They will prepare a detailed report which will appear in the July issue. Dr. Dean Lewis of Baltimore was elected President-elect. Milwaukee was selected as the place for the 1933 session.

OUR ANNUAL MEETING

The profession of Kalamazoo is actively engaged in perfecting arrangements and details for our September, 1932, annual meeting. The Scientific Committee has about completed program features which will embrace a radical departure from former programs. Assurance is given that it will be the best program ever presented. Local arrangements are ideal. Note the details and features that will be announced in the August and September issues. The dates are September 13, 14, and 15.

SURVEY OF MEDICAL SERVICES AND HEALTH AGENCIES

In the May Journal the Committee outlined its objective and plan of study. *The success of this survey is dependent in great degree upon our members' coöperation.* Every member will receive a questionnaire. Fill this out promptly and *return without delay.* County officers will give material aid by responding to the request for county information. It is essential that every officer and member give prompt response.

The information gained from this survey will be of tremendous value in solving economic problems. Members' future interests are involved in the solution. The Committee begs for wholehearted, prompt response and aid.

KENT COUNTY'S SURVEY

Following an address on the "Social Trends of Medicine" delivered before a January meeting of the County Medical Society a committee on Public Relations was appointed. The committee was directed to make a local survey and bring in recom-

commendations. Intensive work was done and on April 19 the Committee presented the Society with a 48-page report of findings and recommendations.

This report has been appraised by the press and citizens as the most outstanding contribution to the advancement of the economic interests of the community. National commendation has been expressed. It is also stated that it is *the first concrete presentation of a plan* that promises to accomplish a solution of providing adequate medical care and hospital care for the indigent and reducing the cost of such care for persons in the lower earning brackets. The Committee presents a sound plan for community participation.

The report is an impressive one, imparting a wealth of facts and actual conditions. It is only possible to tabulate outstanding features. The plan will be outlined in the next issue of the Bulletin of the American Medical Association.

These are a few of the facts:

1. Average sickness per person is four days per year.
2. Average cost per citizen is \$4.25.
3. Physicians' fees are less than 50 per cent of the cost of illness.
4. Average annual wage of 70,000 wage earners in Grand Rapids is \$1,441.24.
5. There are 170 social investigators.
6. There is one physician for every 1,000 population.
7. The gross income of 140 doctors in 1929 was \$1,109,000, giving an average gross per doctor of \$8,276.12.
8. The net income of all Kent physicians was \$6,007.35.
9. On March 1 the community owed the doctors in bills receivable \$1,615,048.
10. The profession's annual contribution to the health welfare of the community is \$792,220—an amount unequaled by the community taxes and charitable welfare contributions.
11. The public voluntary contributions for all health activities is \$272,430.16. The community raises by taxes \$154,094, giving a sum of \$426,524.16, which represents what the community gives for indigent and community health care.
12. The average net income of 40 per cent of the doctors is \$2,698. Net income of 71 per cent of the doctors is \$4,260.

Many more pertinent local facts related to health departments, clinics, hospitals and welfare activities are imparted.

The report reveals outstanding conditions and then sets forth the community's responsibility in dealing with the problem. It is stressed that the burden is not the sole responsibility of the physicians or hospitals. It points out how the profession can no longer be expected to assume the whole burden and advances an equitable plan of solution.

The report was unanimously adopted by the society and the Committee directed to enlist community support in instituting the plan. It is now so engaged.

The following editorials in the local press express the public reception of the report:

LEADING THE WAY

Seldom, if ever, has a revolutionary program formulated by a small group of men been received with the enthusiasm and approbation which the Kent County Medical Society accorded the report and recommendations of its committee on public relations, which it unanimously approved Tuesday night.

Long applause followed the reading of the report. Questions were asked. Commendation was voiced by man after man. They recognized that which Grand Rapids as a whole will recognize—that Grand Rapids, led by these men, is a step—and a long step—in front of the rest of the nation in moving toward the first comprehensive, unified plan for community health.

Some of the things this committee recommended have been tried out on a small scale in a few communities, but never before in the history of American medicine has a medical society taken the lead in such a movement embodying all the reforms to which the Kent County Medical Society has pledged itself. This program will require the active study and coöperation of every civic body in Grand Rapids. It will take time; and the committee, after months of intensive work, has only started. But when it is under way Grand Rapids will have blazed the trail that certainly will be followed by all progressive communities.

To Dr. Ferris N. Smith, chairman of the committee, and his fellow workers, Drs. Harrison S. Collisi, Vernor M. Moore, Donald M. Morrill and Frederick C. Warnshuis, Grand Rapids owes a debt that can be paid only by giving them the full coöperation of every agency and individual in the city.

The report is highly illuminating. The action of the Kent County Medical Society is a great forward step and a real contribution to the easement of the public burden. All those groups and sectors and institutions which have to do with the public welfare should heed, should coöperate, should assist in making the plans applicable to their individual units and, in helping, to give to the public the benefits to be derived.—*Grand Rapids Herald*.

THE DOCTORS' PLAN

The Kent County Medical society has adopted and recommended an intelligent plan devoted to solving at one time the following Grand Rapids and Kent county problems:

1. The excessive cost of public medical care, mounting steadily during the depression.

2. The lack of proper centralized investigation of cases to determine family income or indigence, and the charge for services which a patient may fairly be expected to bear.

3. The consequent excessive demand upon physicians for free service and time, and the loss of income they should reasonably receive from many patients now turned over to them by public and private agencies.

4. The exorbitant cost and inefficiency of public health nursing in Grand Rapids, due to duplication of visits among the various agencies.

5. The lack of a zone hospital clinic and dispensary system, with rates fairly adjusted to ability or nonability to pay, a lack which results in discouraging inconvenience, needless expense, crowding of public offices and unfair standards of compensation.

6. The need of a rotating system fairly distributing free and part pay work among the doctors.

7. The failure to decide upon and adopt a "midrate" fee for inclusive hospital and physicians' services, adjusted to average ability and known in advance.

8. Lack of a system of self-support health insurance.

Ambitiously and after a most thorough survey the Medical Society's committee has attacked all these, and many minor problems simultaneously through its complete and highly constructive report.

Disorganization—or nonorganization—of these services has cost city, hospitals and physicians a vast and unnecessary amount of wasted time and money. Through the leverage of their right to refuse service the physicians in the Medical Society hold a whip hand which they have determined to use, not to the detriment but for the welfare of Grand Rapids.

Their plan undoubtedly should result in a fairer collection of fees and a reduced cost to themselves in terms of purely charitable service. It will bridge that needless gap between full pay and free care, collecting a small if fair sum from many who hitherto either paid nothing or, from pride and lack of funds, suffered illness without attention. It provides a means by which the self-respecting family of severely reduced income may purchase medical service within reason and need not seek public alms for it.

But the greatest service will be that of reorganizing and relocating service to all classes of public or part-pay patients, whose support depends upon donated or tax-supplied funds. If the doctors accomplished nothing else but the setting up of a competent central nursing bureau to eliminate duplication, that in itself would be a large achievement. And that is but one proposal of many, carefully worked out, which appear in their report and deserve sympathetic public and agency consideration.—*Grand Rapids Press*.

DEXTROCARDIA SECONDARY TO EVENTRATION OF DIAPHRAGM: REPORT OF AN ASYMPTOMATIC CASE

According to L. MINOR BLACKFORD and WILLIAM TELFORD BOOTH, Atlanta, Ga., congenital dextroposition of the normal heart without evidence of transposition of other viscera in most cases is probably secondary to eventration of the diaphragm. They report a case of this type in an athletic youth. The condition has been entirely asymptomatic up to the present, and the authors believe that the position of his heart will never cause the patient any trouble. It is possible, however, that subphrenic symptoms may develop or that an extraordinary increase in intra-abdominal pressure, brought on by trauma or tremendous exertion, may result in rupture of the weakened diaphragm.—*Journal A. M. A.*

MINUTES OF THE MEETING OF THE EXECUTIVE COMMITTEE OF THE COUNCIL

April 21, 1932

The April meeting of the Executive Committee of the Council was held in the Michigan Union, Ann Arbor, at 4:00 o'clock, April 21, 1932, with the following present: B. R. Corbus, Chairman, Henry Cook, J. D. Bruce, C. E. Boys, Geo. L. Le Fevre, Henry Carstens, C. F. Moll, President, F. C. Warnshuis, Secretary, and for a period of time, Dr. J. E. McIntyre.

1. The Secretary presented a communication from the Bruce Publishing Co., advising a further reduction in the price of printing the Journal, which was received and filed.

2. The Secretary presented a communication from the President of the Michigan League of Birth Control in which endorsement from the State Medical Society was requested. After discussion no action was taken, but the communication was referred to the Chairman of the Council.

3. Dr. Sinai gave a brief outline of the proposed plan of study that is being conducted by the special committee on Medical Service and Health Agencies in Michigan.

4. Upon motion of Bruce-Boys, the Secretary was directed to notify delinquent members that their Journal would be discontinued with the May issue unless their dues were paid or arrangements had been made for deferred payment.

5. Upon motion of Bruce-Le Fevre, an appropriation of \$100.00 was made to the Public Relations Committee of Kent County for defraying the expense of certain investigations in that county.

6. Upon motion of Boys-Le Fevre, the Secretary was directed to provide badges for the Annual Meeting of the Ladies' Auxiliary.

7. Upon motion of Bruce-Le Fevre, an appropriation was made to help defray part of the expense of the tablet to be erected in the Hillsdale Hospital in memory and tribute to Dr. W. H. Sawyer. The State Society joining with the University in according this recognition of his services to the profession and to the university.

8. Several other features of organizational activity were informally discussed for the purpose of outlining future organizational activity.

The meeting adjourned at 7:15 p. m.

COUNTY SOCIETIES

HILLSDALE COUNTY

The Hillsdale County Medical Society convened at the Orange Lantern Tea Room, Hillsdale, on April 27, at 6:30 p. m. An excellent dinner was served, after which the society adjourned to the Mitchell Library for the regular quarterly meeting; the President, Dr. C. L. Hodge, in the chair. After the reading of the minutes the president introduced the speakers of the evening, Dr. H. W. Plaggemeyer and his associate, Dr. Carl G. Weltman, both of Detroit.

Dr. Plaggemeyer gave a most interesting and instructive address on "What the General Practitioner should know about the Prostate." He characterized it as a vestigial organ of but little use in our present stage of evolution, but owing to its peculiar anatomy and physiology, capable of doing much mischief; its principal function at this time appearing to be to produce an obstructive dam or valve at the neck of the bladder with all its attendant evils. Touching lightly on the pathology of its obstructive action, he entered at once into the practical management of the prostate patient; what warnings of danger to heed, and especially the signs of damage to the kidney, and the patient's general condition and ability to endure a major operation.

He gave statistics to show the greatly diminished mortality of the transurethral method of operation over the older perineal and suprapubic operation and the diminished hospitalization; all going to show a more cheerful outlook for the prostatic patient than heretofore. He called especial attention to the great value of small often repeated doses of laudanum (5-10 M every 2 hours) for the relief of pain, or where there is restlessness or psychologic imbalance in cases where the kidneys are seriously damaged.

Dr. Weltman then gave a demonstration of the transurethral operation of prostatectomy by means of a moving picture film. The lectures were listened to with intense interest by an audience of members of the Hillsdale County Medical Society and a number of guests—Drs. Wade, Holbrook, Schultz, Gist and Olmstead of Branch County and Whitney, Chase and Morden of Lenawee County Societies.

At the close, the doctors were given a cordial and unanimous vote of thanks by those present.

Owing to the lateness of the hour the society adjourned without taking up the other subjects on the program.

D. W. FENTON, *Secretary*.

NORTHERN MICHIGAN

The May meeting of the Northern Michigan Medical Society was held at the Perry Hotel, Petoskey, Thursday, May 12, at 5:30. There was an attendance of over twenty members. After a delightful dinner the meeting was called to order by President Stringham. There was no special program planned and the regular business was immediately taken up. The Committee on Public Relations had a report to submit to the society as a whole for discussion. This report was given and then a general discussion by the members was heard. After a lengthy and somewhat heated debate the report was altered to suit the need and finally passed. A report in detail will be mailed to each individual member of the society, poor commissioners of each county, and supervisors. The discussion having taken so long the meeting was adjourned until next month.

ERVIN J. BRENNER, *Secretary*.

SAINT CLAIR COUNTY

A regular meeting of Saint Clair County Medical Society was held Tuesday, May 3, 1932, at Edgewater Inn, Port Huron, Mich. The following guests were present: Doctors John L. Chester, Alexander Thompson and W. M. Lemke, all of Detroit.

After a very enjoyable dinner which was served to the guests and twenty-one members, Dr. John L. Chester read a splendid essay on "Thyrogenic Heart." After the paper was concluded a very wholesome and interesting discussion took place. The Society thereupon adopted a resolution to request publication of the paper of Doctor Chester in the State Medical Journal.

The following business was transacted: The minutes of the last regular and one special meeting were read and approved; the Secretary was instructed by the Society to send a telegram of sympathy to Dr. C. G. Jennings of Detroit because of the death of his wife; letters from the State Society were read with regard to dues and the appointment of a Public Relations Committee; the President announced the appointment of the following committee: George Waters, M.D., Chairman, W. A. Schaefer and F. V. Carney; Dr. Heavenrich spoke briefly of the survey concluded in Kent County and of the importance of the same; one bill was authorized paid; Dr. R. A. Windham discussed the necessity and the advisability of stopping the weekly advertisement now being printed in the local daily; after a short discussion the Society adopted a resolution to have the President appoint a committee with full power to act to confer with the local newspaper management looking toward the cessation of the weekly advertisement even though the members of the Society must needs defray the unpaid portion of their contracts; Dr. DeGurse reported to the Society concerning arrangements and cost of an annual get-together dinner to be held May 17 at Marine City, Mich.

GEORGE M. KESL, *Secretary-Treasurer*.

WOMAN'S AUXILIARY, MICHIGAN STATE MEDICAL SOCIETY

MRS. J. EARL MCINTYRE, President, Lansing
MRS. W. E. McNAMARA, Secretary Lansing

HYGEIA AND THE MEDICAL AUXILIARY

The Woman's Auxiliary should make the promotion of the distribution of Hygeia one of their chief activities, because it is our own project and because it is the best method of imparting to laymen information on the care of themselves.

Long ago the medical profession felt that the prevention of disease was their responsibility as surely as the curing of disease and, oftentimes at the expense of personal risk and sacrifice, many members spent years of their lives studying methods of prevention.

Great progress has been made in the discovery of causes and methods of prevention of disease but the application of methods has not kept pace; with the result that the public became aware of their physical deficiencies—through examination of the soldiers drafted for the World War, of pre-school children and adults in clinics—and began searching for health. The public, not being able to discriminate between sources, often veered off from scientific

medicine and obtained information wherever it could be found. The medical profession, becoming aware of this, started searching for a far reaching method of giving scientific data to the public. Thus it was that Hygeia was born.

Hygeia should be accessible to the layman to educate him as to what qualifications he should expect of the person to whom he entrusts the delicate mechanism of his body; to inform him regarding the schemes and methods of quacks; so that he can learn of the nostrum evil; to teach him to disbelieve the extravagant claims of the advertiser; to acquaint him with the causes, cures and preventions of disease and to keep him advised of research work and of new discoveries and inventions in the field of health.

Hygeia gives a comprehensive education in health. Its information is up-to-date and authentic, as it is contributed by physicians, nurses, surgeons, dentists, home economic teachers, physical training teachers, health workers, educators, psychologists and dietitians. It is the only health magazine sponsored by the American Medical Association for the information and guidance of the layman in matters of health, and should be in every home, school, college and public library.

MRS. HUBERT M. HEITSCH,
State Chairman for Hygeia.

549 N. Perry St.,
Pontiac, Michigan.

BAY COUNTY AUXILIARY

The monthly meeting of the Woman's Auxiliary to Bay County Medical Society met on Wednesday evening, March 21, with Mr. Hauxhurst for a pot-luck dinner. The dining table was most attractive with spring flowers and delicious food, served from small tables through the living room. After the regular routine of business Keno was played and enjoyed by all present. The members supplied white elephants for prizes, which created much amusement. Time and place of next meeting had not been decided.

MRS. C. M. SWANTEK.

BATTLE CREEK AUXILIARY

The Battle Creek Medical Auxiliary is in very active condition. We have fifty paid members. Our meetings are held on the first Tuesday evening of the month. We usually have a pot-luck supper or dinner of some sort, which is followed by a business meeting which has already been staged by the Executive Committee. The evenings are then given over to a program. This month Dr. Perny of the Kellogg Bird Sanctuary gave an illustrated lecture on birds, and the pictures were interesting as well as beautiful, both in design and color. Mr. Walter Hastings of Lansing had an exhibit of enlarged still life bird pictures made by his department at Lansing. Last month the dinner was followed by a Bridge and Ping-Pong tournament. We have a year's program planned ahead, and each member has a printed program. We have spent about \$400.00 this year on hospital charities. The money we raised by a rummage sale in the Fall, a card party in the winter and a per capita tax this Spring.

We have had sewing fests at three different hospitals. At one of these we made one thousand diapers, five hundred nightgowns, and quantities of hot water bottle covers, and pneumonia jackets.

GETA BECKER, *Publicity Chairman.*

THE DOCTOR'S LIBRARY

THE WAY OF HEALTH INSURANCE. By A. M. Simons, member of the Research Staff of the Committee on the Study of Dental Practice of the American Dental Association; and Nathan Sinai, D.P.H., Associate Professor of Public Health, University of Michigan, and adviser to the Committee on the Study of Dental Practice. 216 pages, cloth bound, \$2.00. Published April 19, 1932, by the University of Chicago Press.

After two years' investigation of eight leading European systems of compulsory health insurance, Mr. Simons and Dr. Sinai present their report in the book, "The Way of Health Insurance," recently published by the University of Chicago Press. It will serve as a warning to the physicians and dentists of this country that if they do not take a hand in formulating the policies of any insurance system that may be installed in the United States, the professions will find themselves in conflict with its practices when it is too late. The authors cite the case in France, when, after the insurance law had passed in the Chamber of Deputies, the physicians and dentists united, tardily, in an attack on it, held up its enforcement for two years, and virtually rewrote it.

The conflict between the professions and the laws, the authors point out, is due to the fact that health insurance always has been, and probably always will be, more "poverty" insurance, or "poor relief," than medical relief. It has its origin in a social need. Its cash benefits are a fundamental part of the system, and take the place of the pay envelope when sickness interrupts earning power. Social workers are largely responsible for the agitation for health insurance and for the formulation of its regulations. Politics also plays an important part. The authors state that the German system, which was the first, was originated by Bismarck in 1883 as a political move to get the support of the Social Democrats. Politicians under any government consider health insurance a palliative for social revolt. The pressure for social insurance becomes acute in times of depression, and history shows that attempts at legislative relief always follow economic depressions. This was true in Europe. It is true in America today. Economists say that 20 to 30 per cent of the sick do not at present receive adequate medical care. Health insurance bills are now before the legislatures of several states.

Another group that takes an active hand in formulating health insurance laws is the commercial insurance companies. This is natural, as they have the organization for the conduct of the business, and experience. In suggesting the error of allowing health insurance laws and regulations to be formulated by social workers, politicians, and commercial insurance companies, the authors make no reflection upon the sincerity or integrity of these agencies, but merely point out that since they know little of medicine and professional practice, only a minor consideration is given to these phases which affect the practitioner and the patient so vitally.

Their most detailed investigation was of the systems in Great Britain, Germany, and France, but a great deal of specific information is given about the systems of Denmark, Sweden, Norway, Austria, Belgium, Hungary, Switzerland, and other countries.

Germany has 44,000,000 insured, according to their statistics. Eighty-five per cent of all physicians give part or full time to insurance practice; a small group has a wealthy, non-insured practice; the rest starve, or practically so, especially the recent graduate, who

usually has to wait five to seven years to get into insurance practice. The insured get both medical and dental service free, and cash benefits.

Great Britain has about 16,000,000 insured (the families of the insured are not covered as they are in Germany). Any registered physician or dentist can require the insurance committee to put his name on the "panel" list, from which the insured makes his choice. This panel list is posted in a public place. The British system differs from the German in the further respect that specialist services are not included, and medical service is, as far as practicable, divorced from the social management that determines whether cash benefits shall be paid. The authors are decidedly of the opinion that separation of the medical service from the administration of cash benefits results in a more efficient and honest operation of the system.

In France—the system which the physicians and dentists practically rewrote after a two-years fight—the relation between practitioner and patient is virtually the same as in private practice. The patient has free choice of practitioner, the practitioner fixes his own fee, and the insured presents the practitioner's bill to the insurance organization and is reimbursed with a percentage of it—usually 80 per cent.

Broadly viewing insurance in action in numerous countries, the authors make three important points: First, notwithstanding the many faults and deficiencies of the various systems, no country that has ever tried compulsory health insurance would be willing to go back to pre-insurance days; second, insurance practice is generally conceded to have increased the average professional income; third, it has not apparently improved public health, nor diminished death rates or time lost in industry on account of sickness.

"One thing at least should be plain," they say, "and that is that he who says, without qualification, 'I am against health insurance,' or 'I am for health insurance,' is speaking out of the great depths of ignorance or great heights of prejudice. There is not one health insurance, but many, and each has a multitude of features, some good and some bad. It is more than within the bounds of probability that this country will follow the example of so many others and try some system of health insurance. Whether that system will bring all the evils along with what is good in previous systems depends upon how wisely those who write its terms pick and choose among the already ample experience of other nations."

CLINICAL ATLAS OF BLOOD DISEASES. By A. Piney, M.D., M.R.C.P., Director of Pathological Dept., Cancer Hospital, London, and Stanley Wyard, M.D., M.R.C.P., Physician Cancer Hospital, London. 2nd edition, with 38 illust., 34 in color, 105 pp. P. Blakiston's Son & Co., Inc., Philadelphia, 1932. \$4.00.

In the short space of a hundred pages, the authors have treated the essentials of the various blood diseases. The text is concise and is well illustrated by colored plates of blood corpuscles. Eight plates illustrate the various normal types of blood cells and their inter-relationships. The other figures (colored to represent the staining given by the Giemsa technic), deal with blood pictures as affected by disease. The text relative to each disease consists of short paragraphs on symptoms, blood condition, complications, diagnosis, etiology, pathology, pathogenesis, prognosis and treatment. A brief account of the technic of blood examination and a glossary of hematological terms complete the work. The success of this atlas in its attempt to cover blood conditions in a concise practical manner is attested by the call for a second edition within two years of the first.

W. T. D.

OF GENERAL MEDICAL AND SURGICAL INTEREST

SUPPURATIVE PERICARDITIS

EDWIN M. MILLER, Chicago, describes a case of suppurative pericarditis in a boy, aged 8, in which surgical intervention was followed by complete recovery. As the boy came to the operating table, he appeared extremely sick and was apparently in great pain. Dyspnea, cyanosis and a bulging precordium were the marked symptoms. Under local anesthesia, with the patient in the sitting position, a 4 inch incision was made just to the left of the sternal margin, and the cartilages of the fifth and sixth ribs were resected so as to expose the bulging pericardium between the border of the sternum and the main trunk of the internal mammary artery. A gush of pus, as from a hose, shot into the air, and within a few seconds a pint or more of pus covered the field. The incision was then enlarged, the fingers were introduced about the heart, and no pocketing was noted posteriorly. The ends of two soft rubber tubes were anchored to the margins of the wound, and through these the cavity was gently irrigated with warm saline solution. Relief was immediate, and the boy left the table much improved. The postoperative course was practically uneventful.—*Journal A. M. A.*

SYMPTOMATOLOGY OF FRONTAL AND TEMPOROSPHENOIDAL TUMORS

FOSTER KENNEDY, New York, states that because of the paucity of definitely known physiologic centers in the frontal lobes, the diagnosis of tumor formation in these areas has long been difficult. Neurologists have been forced to look for main guidance to the results of pressure exerted backward on either the pyramidal tracts or their cortical origins, and to the presence of change in the mental state as a confirmatory factor. Alterations in mental and emotional condition appear more frequently here than from expanding lesions elsewhere. First is seen a lessening in power of attention; irrelevant replies are made. There develops a trivial and meaningless jocosity. Short periods of excitement occur, with foolish, inept and causeless laughter. There is a tendency to take offense easily, with, on the other hand, effusive apologies over trifles. Frontal epilepsy is frequent, characterized by petit mal and sudden attacks of mental confusion. With increase in pressure, hebetude replaces these earlier manifestations; the patient lapses at times into stupor and often can be roused only with difficulty. Frontal stupor is hebephrenic and less profound than is the morbid sleep induced by hypothalamic lesions; patients of the latter order can be roused to crystal-clear consciousness, whereas frontal stupors, by stimulation, are changed to a merely turbid or muddled awareness. There is frequent and characteristic yawning, and urinary incontinence appears earlier than would be warranted by the degree of drowsiness. Headache is less prominent than is usual; possibly the lowering of mental level makes complaint less articulate. There may come forced grasping or tonic perseveration of muscular action in the contralateral hand, from involvement of the anterior part of the corpus callosum and the frontopontocerebellar fibers. In the author's experience, the only station characteristic of disease in this area is titubation on the heels with a tendency to retro-pulsion. Compression backward often produces mild contralateral pyramidal tract signs, but one

must remember that a meningioma placed anteriorly may press across the midline of the brain, giving rise to a similar motor reduction and to reflex changes on the same side as the main growth. Phenomena of lateralizing value in temporosphenoidal tumors consist of the perversions of contiguous functions. The motor tracts and their cortical origins may become so compressed as to give rise to a considerable degree of hemiplegia, which is always most severe in the face, less in the arm, and least of all in the leg. Deep pressure may introduce thalamic coloring: paresis of emotional expression in the opposite face, and occasionally increased sensitiveness in the opposite side of the body. Rarely, athetosis may appear. The author has seen fluctuating pressure on the midbrain by a temporosphenoidal tumor produce fluctuating Argyll Robertson pupillary reactions. However, the most accurate localizing sign has been described elaborately by Harvey Cushing: a quadrantic homonymous hemianopic defect in the contralateral visual field. This occurs from involvement of Meyer's loop of temporal optic fibers; should pressure continue, the pulvinar or the main optic tract may be damaged, giving rise to a complete homonymous hemianopia. When aphasia is present, it is constant in character; a poverty of recollection of names, resulting in circumlocution and descriptive speech. There is perseveration of verbal error, with no difficulty in emission; word blindness does not occur. Almost never is there any word deafness; spoken commands are accurately performed; verbal mistakes are immediately recognized and, if possible, corrected. The power of discrimination in the value of words is proved by the fact that inaccurate promptings are invariably rejected. There is no true loss of word memory, only a dimming of word recollection. The memories are for the most part intact, but their facilitation is difficult, and the patient is unable by force of will to bring them above the threshold of consciousness, below which they lie latent and beyond the patient's conscious grasp.—*Journal A. M. A.*

ACUTE PYOGENIC INFECTION OF SPINAL EPIDURAL SPACE

SAMUEL S. ALLEN and EDGAR A. KAHN, Ann Arbor, Mich., report three cases of acute pyogenic infection of the spinal epidural space. The conditions most likely to be confused with epidural infection are poliomyelitis, leptomeningitis, abscess of the spinal cord and tumor of the spinal cord. Poliomyelitis may be ruled out by the presence of a sensory level and of a subarachnoid block. Lumbar puncture, with examination of the fluid, is usually sufficient to eliminate the second possibility. As to abscess of the spinal cord, the simultaneous appearance of the sensory and motor symptoms certainly suggests the presence of an intramedullary lesion, while pain, appearing several days before the onset of the paralysis, is in favor of extradural involvement. A spastic and not a flaccid type of paralysis would be expected in the case of spinal cord tumor. The severe febrile state would also be absent. Of course, these points of differentiation are merely generalities, as the diagnosis of the localization and nature of lesions of the spinal cord is very often an extremely difficult matter. And aside from an academic standpoint, a mistaken diagnosis of abscess or tumor of the cord is of no great import, as immediate laminectomy, on the sudden appearance of paralysis, is certainly indicated. From the onset, the disease assumes the character of a profound toxemia. The only method of combating the infection is, perhaps, operation with adequate drainage of all the tissue involved. As the process is always quite

extensive, it requires the removal of many laminæ. The greatest involvement is in the midthoracic region, posterior to the spinal nerve roots. Following operation, the treatment of the wound depends entirely on the method most favored by the surgeon. Needless to say, the prognosis is quite poor, regardless of how early a diagnosis is made and how soon thereafter a laminectomy is done. Very few recoveries have been reported. The cord changes lead one to believe that unless operation is employed early in the course of the disease, the damage to the cord will be irreparable.—*Journal A. M. A.*

THE BAER MAGGOT TREATMENT OF OSTEOMYELITIS: PRELIMINARY REPORT OF TWENTY-SIX CASES

EDWARD HARLAN WILSON, CHARLES A. DOAN and DAVID F. MILLER, Columbus, Ohio, report that twenty-two of twenty-six children and adult patients, with either acute or chronic osteomyelitis, have been successfully treated with fly larvæ during the past eighteen months in the university osteomyelitis clinics. The average healing time for all cases has been ten weeks; for those lesions occurring in children, seven weeks. The type of scar remaining is a distinct improvement in that there is an obliteration of the cavity occasioned by operation and the disease process through the ingrowth of healthy granulation tissue with at least partial restoration of the blood supply. The authors emphasize the fact that the best surgical judgment must always be exercised in the individual case and precede the after-treatment with fly larvæ, if satisfactory results are to be obtained.—*Journal A. M. A.*

GASTRIC MUCIN IN TREATMENT OF PEPTIC ULCER

ARTHUR J. ATKINSON, Chicago, treated forty-three patients with history, signs, symptoms, laboratory evidence and roentgen manifestations of peptic ulcer with mucin. The patients were chosen because all the evidence concurred in the diagnosis. The therapeutic dosage of mucin totaled 90 Gm. a day, but three patients received as much as from 150 to 238 Gm. a day in a study of the effect on the gastric acidity. Ewald, fractional and motor test meals were given, and the stools examined for occult blood. The "acid test" as suggested by Palmer was used at first and later modified to coincide with Hardy's technic. The forty-three patients in the series became symptom-free within an average period of 1.7 days. The types of ulcers treated in the series are tabulated. The average duration of ulcer history, which was 5.2 years, indicates the marked chronicity of the ulcer diathesis in this group. Eighteen of the patients were awakened by pain suggesting gastric retention or continued secretion. Thirty-five of the patients in the series had previous medical management, spending a total of 208 weeks in hospitals, an average of 5.9 weeks per patient. All obtained relief on mucin with a total of twenty-five weeks of hospitalization, an average of 0.71 week per patient. Fifteen, having distress while on medical management when first seen, were continued ambulatory and obtained complete relief with mucin. Although any form of therapy may bring about a remission, there is no doubt that remarkable results have been obtained in patients who were previously having distress on dietary or alkali management. The time of observation has been too short to prove that the improvement is permanent in a disease in which the natural history is so variable. The author feels fully justified in believing that mucin treatment is conducive to healing.—*Journal A. M. A.*

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CONTENTS

Acute Epidemic Encephalitis. Fred P. Currier, M.D., and David B. Davis, M.D.....	437	A Case of Primary Carcinoma of the Liver in an Infant. Merle Pierson, M.D., and Mary Campbell, M.D.....	482
The Routine Use of the Filament-Nonfilament Count. William S. Reveno, M.D., and Morris S. Berent, M.D.....	443	Michigan's Department of Health. C. C. Slemons, Dr.P.H., M.D.....	483
Report of a Series of Cases of Bougie and Bag Inductions of Labor. G. A. Carmichael, M.D.	449	Editorial:	
Actinomycosis Primary in Ovary. C. E. Boys, M.D.	453	Healing Cults	485
Spinal Anesthesia in Cases of Emergency Surgery. Earl George Krieg, M.D.....	456	Prophylaxis Against Malpraxis.....	486
Rural Obstetrics—Analysis of 500 Cases. Charles F. DuBois, M.D.....	462	The Filament-Nonfilament Count.....	486
Kidney Infections of the Adolescent Female. Robert L. Cowen, M.D.....	469	Taxation	486
Asphyxia Neonatorum. Harold Henderson, M.D.	471	A Bit of Medical History.....	487
Relationship of Laryngeal Paralysis to Medicine and Surgery. Edgar E. Poos, M.D.....	477	Medical Economics:	
A Report of Three Cases of Trichiniasis With One Death. C. N. Sowers, M.D.....	479	Can We Afford State Medicine? Part V. J. G. R. Manwaring, M.D.....	494
		Communications	496
		General News and Announcements.....	497
		Obituary	498
		Society Activity	499
		County Societies	503
		The Doctors' Library.....	506

ACUTE EPIDEMIC ENCEPHALITIS*

FRED P. CURRIER, M.D., and DAVID B. DAVIS, M.D.

GRAND RAPIDS, MICHIGAN

Epidemic encephalitis is a disease which offers a most perplexing problem to the present day physician. It is true that we are becoming more and more adept in the diagnosis, particularly of the chronic forms of the disease, yet there is still considerable uncertainty as to the bacteriology and much to be desired as regards effective treatment. Considered in its entirety, and with particular attention to the social, medical, and economic aspects, we are presented with a problem which is quite as important as infantile paralysis. Because of the wide scope which such a disease presents for discussion, it was deemed advisable, especially in view of the recent interest in anterior poliomyelitis, to limit this paper to the subject of acute epidemic encephalitis.

According to the survey of the Matheson Commission published in 1929, the disease really began as an epidemic in this country

in 1919 and reached a peak of about 8,000 cases in 1920. From then on, it gradually receded until 1924, when there were again over 6,000 cases. The number of cases again gradually fell off to about 2,000 a year in 1927. From personal inquiry, I find that it is seldom that an acute case is seen in certain of the Eastern cities of the

*Read before the Medical Section of the Michigan State Medical Society at the Annual Meeting, Pontiac, Michigan, September 23 and 24, 1931.

United States during the last few years. In one of the largest clinics in the city of Philadelphia, an attending neurologist had not seen an acute case in the past five years. The benign character of the acute symptoms in certain instances may account for the fact that some of these cases are rarely seen in the out-patient departments of large hospital clinics.

The authors have had the opportunity of seeing twenty-six acute cases since 1927, fourteen of these occurring in the year of 1930, the rest being about equally distributed throughout the other years. This number of cases is as frequent as when the epidemic was at its height in our particular community in 1919 and 1920. Similarly to the situation as regards anterior poliomyelitis, there appears to have been no year, since 1927 at least, when no cases have been encountered.

It has been fairly well established by Levaditi¹ and others that this disease, like anterior poliomyelitis, is caused by a filterable virus. However, there are others, particularly Rosenow, who claim the infecting organism to be a streptococcus. Levaditi furthermore attempts to show that the virus is closely associated with the filterable virus of herpes encephalitis. His convincing work has been carried out principally on rabbits, but, of course, there is always room for doubt as to whether the same conclusions would hold true as regards the human. That the disease is not identical with poliomyelitis has been established by Amos,² who showed that there was no cross immunity for the two diseases. Also, their symptomatology is sufficiently different to establish each as a disease entity.

Although the total number of cases in this series is too small to draw any conclusions regarding seasonal incidence, yet we found that the months of November, December, January, and February had the least number of cases. One would naturally expect that, inasmuch as this disease is usually thought to be preceded by an acute nasal infection, the late fall and winter months would show the greatest incidence. As a matter of fact, only six of twenty-four cases gave a history of upper respiratory infection preceding the encephalitic symptoms. It is now quite a common observation, especially in neurological and medical practice, that many so-called post-encephalitic cases are unable to give a

history as to the time of their acute infection.

TABLE I
26 cases (total number)
Yearly occurrence:

Year	No. cases	Month	No. cases
1927	4	July	2
1928	1	August	4
1929	4	September	2
1930	14	October	4
1931	3	November	1
		December	1

November, December, January, and February have the least number of cases.

The Matheson report shows that the seasonal incidence taken throughout the world was highest during January and gradually declined to the lowest level in the summer months to again begin an ascending curve in late October, November, and December. The Japanese epidemic of 1924, however, showed a very high incidence during the summer months.

Generally speaking, epidemic encephalitis is a disease of youth, the average age in this particular group being 24 years, while the average age in infantile paralysis would undoubtedly be somewhat lower. The average temperature of 100, pulse of 92, and respiration rate of 23, all show low readings similar to the average case of infantile paralysis.

TABLE II

Total number of cases, 26 (male, 15; female, 11).
Average age, 24; oldest, 61, and youngest, 2.
Average temperature, 100.05; lowest, 98; highest, 103.
Average pulse, 92; slowest, 74; highest, 150 (in child aged 2).
Average respiration, 23; slowest, 20; highest, 40 (in child aged 2).
Six out of 24 cases gave history of upper respiratory infection.
In five recorded cases, there was an average lapse of time of 10 days after the acute respiratory infection until the encephalitic symptoms appeared.
Average number of days of acute illness, 34; shortest being 4 days, and the longest, 110 days.

In only 6 of 24 cases was there a preceding upper respiratory infection, so-called "head cold," and in 5 of these cases there was an average lapse of 10 days before the neurological symptoms actually appeared. We are quite firmly convinced that the infection in many of these cases may have been so mild, particularly on the part of children, as to have gone unnoticed. It is

quite possible that many people infected with this organism may have been hosts to the virus for months or even years before the acute encephalitic symptoms came on. It must be clearly understood, too, that although this disease followed in the wake of influenza, the two diseases are not identical. This has been quite definitely proven by reliable bacteriological research, as well as by the symptomatology as regards the two infections of the nervous system.

In only 10 cases of this series was there a history of general malaise, weakness, and aching, and that lasting but for a few days (4). The acute illness, as a whole, however, lasted on an average of 34 days.

That lethargic encephalitis is a misnomer as regards this particular disease is well brought out in this series of cases, as lethargy occurred in only 64 per cent of the total number. Strange to say, neither insomnia nor reversal of sleeping hours was noted in any case. A symptom quite as prominent as that of lethargy was that of myoclonus, which was found in varying degrees of severity in 62 per cent of the cases, or sixteen of the total number. More will be said of this particular feature later.

Headache ranks with lethargy and myoclonus in being an important symptom. In 15 of 23 cases, headache was present, and in 6 of these 15 cases, headache was of a posterior cervical type, such as is often associated with the early appearance of meningitis or meningismus. In one case in particular, headache was the reason for the entrance of the patient into the hospital.

The monotone speech, so common in the pseudo-Parkinsonian type of epidemic encephalitis, is not found, as a rule, in these early cases. There were only four of these patients who gave a history of any speech disturbance which was at all suggestive of the monotone speech of the chronic encephalitic. In one case, a man of about 30 years of age, there was a history of stuttering, which came on suddenly and lasted for about twenty-four to forty-eight hours. As the patient expressed it later, "It seemed just as though my clutch was slipping."

Within the past week I have observed a case of acute encephalitis in a boy ten years of age, and in which there was a speech disturbance. It seemed difficult for him to separate the jaws, and his face, even after an illness of only a week's duration, had

already assumed a somewhat Parkinsonian expression. The lips were always in apposition, and he said it seemed difficult for him to talk. He also had difficulty in using his arms and his legs and would drag both toes in walking, something similar to the more severe cases of chronic encephalitis. However, all his deep reflexes were present and sensation was normal, thus serving to differentiate the condition from infantile paralysis. He was having insomnia, with visual hallucinations occurring at night.

Naturally, during the recent scare over poliomyelitis, his sickness was suspected to have belonged in that category. He had a history of an acute head cold five days preceding the onset of the nervous symptoms, but he had no history of any intestinal disturbance.

Besides the speech disturbance, the other symptom pointing toward bulbar involvement, which was dysphagia, or disturbance in swallowing, occurred in only 3 cases of 24 (12½ per cent).

Double vision (diplopia) does not seem to be observed as commonly in this series of cases as it was during the earlier years of the appearance of this disease in this country. We were led to believe that diplopia was present in practically every case, or at least in a large percentage of cases. We find it complained of in only 4 cases of the 24 (16.6 per cent).

Difficulty in voiding urine or a total inability to void urine was noted in 4 of 21 cases. Just where the lesion is in this particular symptom would be difficult to state. We have observed it in the cord lesion of anterior poliomyelitis, although I believe the average text will state that bladder symptoms are rare in infantile paralysis. Perhaps it would be more accurate to state that paralysis of the bladder muscles alone is rare in infantile paralysis.

Drizzling, which is so common in the Parkinsonian type, was absent in all these cases.

Besides the myoclonic movements, which were spoken of above, we also noticed fairly commonly other muscular movements, such as facial twitching, fascicular tremors of certain muscular groups, and in two cases the patients suffered from generalized convulsive movements. In one instance, there was Jacksonian epilepsy during the acute attack.

TABLE III
MYOCLONUS

1. Symptom present in 16 cases (62 per cent). Practically the same frequency as lethargy (64 per cent).	
2. Part of body affected:	
Neck muscles.....	1 case
Respiratory muscles.....	6 cases
Abdominal muscles.....	7 cases
Back muscles.....	7 cases
Left shoulder muscles.....	1 case
Extremities.....	3 cases
Left face muscles.....	1 case
Gluteal muscles.....	1 case

The myoclonic movements deserve special mention. We will show you some of those cases in the moving pictures later. These myoclonic movements are frequently not complained of by the patient, and it is not uncommon for them to be passed over unnoticed by the examining physician. Two cases of this series would have been missed entirely if the patient had not returned to the office on the second day and been asked to expose the chest and abdomen for complete examination. The myoclonic movements were present in the abdomen on the second day, but were absent on the first day. Their presence made the diagnosis in both instances. These myoclonic movements are frequently relieved in a day or two days, but they may persist anywhere from a week to a year or more. I have seen one case in which they persisted for over a year.

A particularly interesting situation arose in one case in which the patient suffered from myoclonic movements of the back muscles. The patient associated these myoclonic movements with an injury which he had received while at his work. Thus there was injected into the situation a medico-legal phase. However, after a rather slow onset, the patient went on to develop cranial nerve palsies and the Parkinsonian expression, and within several weeks died in the acute stage of the disease. In passing, it might be called to your attention that myoclonic movements frequently follow distemper in dogs and are often diagnosed as chorea. The dog must be given some consideration as one of the common carriers of the disease.

In only one of these cases was the gait affected. The oldest case in the series, a man aged 64 years, could have easily been mistaken for a long-standing case of locomotor ataxia (tabes). However, the sensory examination and a study of the deep

reflexes showed him to be absolutely normal, thus ruling out any such diagnosis.

No atrophy of muscle groups was seen, except in one case in which there developed a contracture very early in the acute stage. We assumed that the atrophy in that case was due to disuse occasioned by the spastic condition rather than to any changes in the anterior horn cells of the spinal cord. The absence of atrophy is a good point to remember in the differential diagnosis between this disease and infantile paralysis. However, it must be remembered that we have associated with this same filterable virus infection the so-called encephalomyelitis cases; also the encephalomyelitis disseminata as emphasized by Spiller³ recently, but designated also as early as 1911 by Oppenheim⁴; and, thirdly, the cases showing a combination of encephalitis, myelitis, and neuritis in which there may be atrophy present. The atrophy in those cases is apt to appear much more slowly than in the case of anterior poliomyelitis (infantile paralysis). Some of the pictures which will be shown later will show atrophy in certain instances, but atrophy which came on slowly after the acute stage of the disease had passed.

The tremors which are noticed so commonly, especially in the late stages of this disease and in the Parkinsonian type, are not present, as a rule, in the early cases. We saw no fine tremors suggestive of the neurasthenic type except in one instance in which the patient developed a fine tremor and sweating and the restlessness suggestive of toxic goiter. However, his metabolism test and an examination of the heart failed to substantiate any such suspicion. It was undoubtedly a manifestation of sympathetic nervous system involvement. He also had marked myoclonic movements, which could be brought out as late as a year later if enough exciting influence was brought to bear.

The deep reflexes, that is, the biceps, triceps, knee, and Achilles, were exaggerated in 4 cases, while the superficial and deep reflexes were exaggerated in 2 cases. In one instance, a very interesting phenomenon was observed. By a slight touch most anywhere over the body, especially the abdomen, or by a slight tap to the knee, the patient would be thrown into a reflex of the whole body, with a tendency to pull the head suddenly and quickly forward. We termed this a

"spreading reflex." In one other instance, a similar thing was observed, but not to such a marked degree (a picture will be shown later of this particular case). An unusually marked degree of increase in muscle tonus was observed in another instance. This was in a boy of about fourteen years of age. During the first week or so of his illness, this increase in muscle tonus, together with a marked tenderness of his muscles with the additional tendency to throw him into a generalized tonic spasm if the muscles were pinched, made it necessary to keep him under opiates. His was the case in which there developed a contracture of the one foot and ankle.

At the same time that he suffered from this marked increase in muscle tone, he also had the myoclonic movements of the abdomen, making it an extremely painful picture. Somewhat later, when the acute tenderness had disappeared, one could turn this patient over much as you would a slab of stone. Strange to say, all of this eventually disappeared. (Pictures of this case, before and after the acute illness, will be shown.) We interpreted this patient's lesion causing the increase in muscle tone as being one of a bilateral lesion of the basal nuclei, presumably corpus striatum.

A Babinski sign and a Kernig sign were noted in four cases. Even in spite of the fact that some of these cases had tenderness in the cervical region, a typical Brudzinski sign was not recorded in any case, so that its absence points more toward a meningismus in those cases than toward a true meningitis.

It may seem somewhat paradoxical that in view of the fact that cranial nerve palsies are such an important aid in the diagnosis of epidemic encephalitis, there was no actual paralysis of any cranial nerves in this whole series. But, paresis, or weakness of the function, of certain parts supplied by motor cranial nerves was evident in a number of cases. This paresis brought on such symptoms as dysphagia, diplopia, stuttering, and a bilateral facial weakness in one instance. The sensory cranial nerves seem to be particularly immune in this infection. There was no symptom or sign to indicate their involvement in any case. The pupillary reactions were likewise normal, except in one instance in a child two years of age in which one could obtain no reaction to light. Cases, of course, have been reported in the

late stages of this disease, in which one apparently was dealing with an Argyll-Robertson pupil. We have seen several such instances in our own collection of chronic cases and in which we were unable to make a diagnosis of syphilis by any of the available tests or to substantiate it by the history. There was nothing unusual about the examination of the fundi, except in one case in which the consulting physician reported a hemorrhagic retinitis with papillitis. This occurred not in the acute stage but rather in the subacute stage, and the case was suspected, naturally, of being a brain tumor. If one had not known and observed the early history of the illness, which was distinctly of an infective type with fever, a diagnosis of tumor in a silent area would have been quite reasonable. However, the case went on to clear up gradually in the course of a few months, and at the present time is well.

Except in the one case which showed the marked increase in muscle tonus, we saw no associated sensory changes in the body. In this particular case, the patient had a marked hyperalgesia and hyperesthesia over the whole body. A mere touch or a very slight pin prick was enough to produce a generalized tonic spasm with severe pain.

The sympathetic nervous system in these acute cases was not involved to the extent which we observe it in chronic cases. Such changes as dryness or oiliness of the hair and the skin, changes in the sweating, particularly of the hands and feet, are quite common in the chronic case, but not so with the acute case. As has been mentioned before, we noted sweating in only one instance. No particular flushing or blanching of the skin worthy of note was recorded, except in the one instance suggesting the picture of toxic goiter.

The spinal fluid findings were interesting in that many of them appeared to be practically normal. However, in all of them there was a slight increase in the cell count, the lymphocyte count averaging 44, and these being, in the average case, small lymphocytes. Albumin and globulin were found in a trace in about half of these cases examined. Quantitative sugar test, which is quite important in differentiating this condition from tuberculous meningitis, was found to be normal in those cases examined, there being an average of 67 mgm.,

per 100 c.c. Quantitative chloride was likewise found to be within range of normal. This, again, is a very good differential test to use in determining whether one is dealing with tuberculous meningitis. The chloride test in this particular condition is apt to be higher than that of tuberculous meningitis.

TABLES IV AND V
Spinal Fluid Findings

1. Clear, except for one fatal case.
2. White cell count average per c.mm., 44.
3. Red cell count, 750. Two cases had counts of 6,750, which raised the average from 79 to 750. The lower figure is more nearly the correct average.
4. Carbotic test, trace in 8 of 19 cases.
5. N. A. I, trace in 7 of 19 cases.
6. N. A. II, trace in 10 of 19 cases.
7. Fehling's test for sugar, positive reduction in 6 of 14 cases.
Normal in 5 of 14 cases.
Reduced in 3 of 14 cases.
8. Quantitative sugar, 67 mgm., per 100 c.c.
(Normal, 50-75.)
9. Quantitative chloride, 652 mgm., per 100 c.c.
(Normal, 720-750.)
10. Gold-curve flat in 6 of 17 cases.
Very slight rise in the rest. Never over 2 at any one point.
11. All Kahn's negative on both blood and spinal fluid.
12. Animal inoculations negative in 3 cases tested.
Negative T. B., tests in all cases examined.
13. Average white count on blood, 9,250.

Sugar and chloride, according to the statistics of Ayer and Fremont Smith,⁵ are low in tuberculous meningitis while perhaps normal or slightly above normal in epidemic encephalitis. Likewise, in acute poliomyelitis, they are both normal or slightly increased. In general, it may be said that quantitative sugar, chloride, and protein tests offer much more assistance in differential diagnosis than simple qualitative tests. The gold curve is practically flat in all these cases. In a few cases in which animal inoculations were tried and guinea pigs used, our results were negative, as was to be expected. Levaditi¹ had success in his animal experimentations by using rabbits. They seem to be the animal most easily infected, but the results there are not uniformly satisfactory. So, from a practical standpoint, animal inoculation is important principally in a negative way. Our examination for tuberculosis in both the spinal fluid and with animal inoculation was negative in all cases examined. There was not the typical pellicle formation in the spinal fluid in any case.

The average white cell count on the blood

was 9,250, and the differential count was within range of normal.

As to the treatment of this disease, it can be said without hesitation that there is at present no particular drug or medication in any form which can be considered to be specific. The Matheson report quotes a statement by Hall as follows:

"The evidence as to the real value of any of the many methods of treatment advocated is difficult to estimate in a disease, the natural progress of which is so extremely irregular. The verdict, on the whole, is that at present any reliable therapeutics, either for the disease itself or for its many after results, does not exist."

Our acute cases were all required to rest in bed for long periods of time, and iodides and salicylates were given by three different methods—intravenously, orally, and per rectum. The iodides and salicylates in starch water were given per rectum in children and in those cases in adults in which there was evidence they produced unpleasant stomach symptoms. In a general way, it may be said that the combination of the two drugs seemed to give the patient some relief and in certain instances the temperature would drop to normal. We were inclined to think that perhaps it had a favorable influence on the outcome of the acute symptoms, but perhaps "the wish was the father of the thought." We also used occasional lumbar drainage and typhoid vaccine. The typhoid vaccine was given in a dosage sufficient to produce a general reaction in the individual. This reaction, in certain instances, was accompanied by a chill and a rise in temperature. No specific vaccine or serum was used in any of this series of cases. It has been quite definitely shown that medication along that line is not definitely specific for the disease and that the patients, as a whole, may get along quite as well without such medication as with it. Until more can be done as regards the bacteriology of this particular disease, it is quite safe to say that our efforts at medication and treatment will be more or less haphazard and futile. It might be mentioned that from the symptomatic standpoint we have obtained very good results in the chronic cases, as has been the experience of many others, with the use of hyoscin and stramonium. These two drugs seem to be the most reliable in alleviating such symptoms as the increase in

muscle tonus, the marked slowness of movement, and such symptoms as drooling and slowness of speech. Either of these drugs may be used over a long period of time without any marked deteriorating effect on the part of the individual.

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THE ROUTINE USE OF THE FILAMENT-NONFILAMENT COUNT*

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This study was undertaken with the object of determining whether the filament-non-filament count could be adopted as a routine procedure and whether it would prove of greater value to the clinician than the differential count that is so universally used.

The frequent instances of the failure of the ordinary differential count to coincide with the clinical findings have stimulated many workers towards more minute studies of the behavior of the leukocytes, and more particularly the polymorphonuclear neutrophils, in infection. Foremost among these was Arneth,¹ whose work on the changes in the nuclear material of neutrophils during acute infections represented a noteworthy effort towards gaining more accurate and extensive information on this subject, and resulted in his separation of neutrophilic leukocytes into five groups. In Class I, which in normal individuals represented about 5 per cent of the total, were placed those cells with a slightly indented nucleus. Class II, constituting 35 per cent of the total, had two lobulations. Class III, representing 41 per cent, had three; Class IV, making up 17 per cent, had four, and Class V, making up only 2 per cent, had five or more lobulations. The age of the cell corresponded to the number of lobulations, those of Class III or IV being older and more differentiated than those of Class I or II. His further classification of these, as well as the lymphocytes and monocytes, resulted in some eighty-one subdivisions and made the method too cumbersome for practical use. The value of the method was, however, generally recognized, particularly the changes which he termed the "shift to the left" and the "shift to the right," the former representing the response of myeloid tissue to the stimulus of infection by an increase in the number of immature cells, and the latter a decrease in the number of immature cells back towards the normal as the stimulus of infection subsides.

Von Schilling,² in 1920, published a modification of Arneth's groupings which is of great clinical value. He divided Arneth's Group I into four types and, in addition, called attention to variations in the size of the granules in the cytoplasm and their tendency to stain more deeply as evidence of toxic changes in immature polymorphonuclears. Pons and Krumbhaar,³ Cooke and Ponder⁴ and Piney⁵ are outstanding among those who have made singular contributions towards the simplification of the method of evaluating changes in the neutrophils.

Basing their classification of the different types of polymorphonuclear neutrophils on the work of the authors already mentioned, Farley, St. Clair and Reisinger⁶ developed what appears to be a simplified method that lends itself readily to routine use by those lacking special training in making blood examinations. It is more directly based on the work of Cooke and Ponder, who classified the polymorphonuclear neutrophils into five separate groups.

The method of Farley et al. involves a regrouping of the five classes of Cooke and Ponder into two classes, the first identical with their Class I, and the second including their Classes II, III, IV, and V. The first class is termed the "nonfilament" while the second is termed the "filament."

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From a study of a series of counts in 100

normal individuals Farley and his co-workers found the upper limit of the normal young polymorphonuclear leukocyte or the non-filament count to be around 16 per cent of cells, while the average count in 190 presumably normal adults was around 8 per cent.

Mullin and Large,⁷ in reporting a series of filament-nonfilament counts made according to the method of Farley et al., and carried out on some thirty cases of acute infection, found the procedure a distinct aid in evaluating the clinical picture of disease, in following more closely the course of the infection, and foretelling complications in convalescence.

Following the simplified method of Farley et al., we have made use of the procedure in a series of one hundred hospital patients. Smears were made on glass cover-slips and stained by the Wright method. Observations were based on counts of 100 leukocytes, the relative percentage of filament neutrophils, nonfilament neutrophils, lymphocytes, monocytes, basophils and eosinophils being determined in each instance. Because of the relative unimportance of the other types of cells in this study, only the percentages of filament and nonfilament neutrophils and the small lymphocytes are reported. The normal standards adopted were: nonfilaments 8 to 16 per cent, and small lymphocytes 25 to 30 per cent.

In the evaluation of our data due regard was had for the facts brought out by Weiss,⁷ that in infections each cellular system is called on in definite order. The bone marrow, which supplies the neutrophils, is the first to respond to the call. If the demand is light, that is, if the infection is mild, the delivery of segmented or filamentous neutrophils is increased while the unsegmented or nonfilamentous cells are increased only slightly. When the call is very urgent, as in a severe infection, the number of the non-filament neutrophils shows a moderate to a marked increase.

While this neutrophilic phase is in action, the eosinophils are absent from the circulation, as are most of the monocytes, and it is noted that the lymphocytes have decreased to from 1 to 10 per cent. With the clearing up of the infection, the reticulo-endothelial system swings onto the center of the stage to replace the neutrophilic phase. A shower of monocytes appears in the blood-stream

the moment the peak of the nonfilament cells begins to recede. This phase is rapidly followed by increased activity of the lymphatic system and the lymphocytes begin to rise with recovery, attaining at times a figure of 50 to 60 per cent.

The patients on whom this study was conducted were divided into five groups: I, non-infections; II, chest infections; III, abdominal infections; IV, pelvic infections; and V, miscellaneous conditions. The findings in the various groups are listed in Tables I, II, III, IV, and V.

I. NON-INFECTIONS

In Table I are listed eighteen patients in whom no evidence of an infectious process was found. The total white count never exceeded 10,400. The filament percentages did not show any unusual deviation from the established normal while the nonfilament percentage in each instance was well within the prescribed limit of 8 to 16 per cent. As expected, the small lymphocyte percentage did not show the depression below ten per cent, which is usual in infections. All of the counts, therefore, were in direct line with the diagnoses.

Of interest in this group was patient 11, with a history of neurosyphilis of two years' standing, with early tabes dorsalis. The response of this patient to a Swift-Ellis treatment with an increase in the nonfilament percentage from 16 to 22 and a drop in the small lymphocytes percentage from 40 to 14, is comparable to the experience of G. A. Winfield of the Cleveland Clinic as reported by Mullen and Large.⁷ Dr. Winfield observed that in neurosyphilis, following inoculation with the malarial parasite, very high percentages in the nonfilament counts were noted. This change occurred rapidly and was associated with a marked leukopenia, but none of the cases terminated fatally.

Patient 18 had been in poor health for five years, with the complaint of tiredness and generalized pains. Thorough study failed to reveal evidence of any infectious process. The filament and nonfilament count substantiated the findings. The value of the count in patients of this sort, as well as in those in whom malingering is suspected, is not to be overlooked.

II. CHEST INFECTIONS

In this group are included ten patients with lobar pneumonia, four with broncho-

TABLE I.—NON-INFECTIONS

Diagnosis	Initial count				Final count				
	WBC	F	NF	SL	WBC	F	NF	SL	Progress
1. Prostatic hypertrophy.....	8,000	46	15	36	8,400	45	16	35	Died
2. Cervical laceration; fibromyoma.....	9,700	70	15	11	8,400	60	15	26	Recovered
3. Cardiac failure.....	8,900	70	14	12	.....	.....	.....	.....	Died
4. Renal calculus.....	9,400	80	7	14	.....	.....	.....	.....	Recovered
5. Ruptured Graafian follicle.....	9,700	72	16	10	.....	.....	.....	.....	Recovered
6. Angina pectoris.....	8,900	65	14	20	.....	.....	.....	.....	Recovered
7. Myocarditis; obesity.....	9,800	60	14	22	.....	.....	.....	.....	Recovered
8. Arthritis deformans.....	6,800	58	11	30	.....	.....	.....	.....	Improved
9. Toxic adenoma of thyroid.....	8,600	59	11	30	.....	.....	.....	.....	Unimproved
10. Neurosyphilis.....	10,400	63	12	20	.....	.....	.....	.....	Improved
11. Neurosyphilis.....	7,400	42	16	40	10,500	42	22	14	Improved
12. Hemorrhoidectomy.....	7,600	49	13	32	8,200	44	15	35	Recovered
13. Leiomyofibroma.....	4,300	55	12	25	8,600	55	9	33	Recovered
14. Chronic osteomyelitis of thumb.....	8,300	58	13	22	.....	.....	.....	.....	Recovered
15. Polypoid endometritis; laceration of cervix.....	10,300	48	15	36	.....	.....	.....	.....	Recovered
16. Peritoneal adhesions.....	7,300	55	12	30	7,200	59	13	25	Recovered
17. Adenofibroma of mammary gland.....	9,800	78	9	12	.....	.....	.....	.....	Recovered
18. Anxiety neurosis.....	8,300	52	15	30	.....	.....	.....	.....	Unimproved

TABLE II.—CHEST INFECTIONS

19. Lobar pneumonia.....	27,600	63	33	1	12,300	55	16	23	Recovered
20. Lobar pneumonia.....	13,500	28	60	8	11,300	57	19	24	Recovered
21. Lobar pneumonia.....	9,800	42	23	24	7,800	43	16	40	Recovered
22. Lobar pneumonia.....	17,600	65	22	10	8,500	58	11	31	Recovered
23. Lobar pneumonia.....	15,300	58	25	13	10,000	42	17	41	Recovered
24. Lobar pneumonia.....	17,200	62	23	12	12,400	63	12	13	Died
25. Lobar pneumonia.....	10,100	20	57	21	.....	.....	.....	.....	Died
26. Lobar pneumonia.....	13,500	20	62	17	.....	.....	.....	.....	Died
27. Lobar pneumonia.....	8,700	52	35	5	.....	.....	.....	.....	Died
28. Lobar pneumonia.....	20,400	50	30	20	.....	.....	.....	.....	Died
29. Bronchopneumonia.....	38,500	57	22	12	12,300	64	12	20	Recovered
30. Bronchopneumonia; lung abscess.....	18,900	55	38	8	8,200	40	20	37	Recovered
31. Bronchopneumonia; tuberculosis.....	12,500	55	24	18	.....	.....	.....	.....	Unimproved
32. Bronchopneumonia; renal calculus.....	12,800	55	40	5	8,000	62	12	22	Recovered
33. Bronchiectasis.....	9,400	66	15	17	.....	.....	.....	.....	Unimproved
34. Hemothorax.....	14,750	39	32	30	9,400	60	11	21	Improved
35. Hemothorax.....	9,200	59	15	22	10,500	62	11	20	Improved

pneumonia, one with bronchiectasis, and two with traumatic hemothorax. Counts were made daily in all of these patients but only the initial and final counts are recorded. As is usual in chest infections, the total leukocyte count was high in nearly every instance.

A typical example of the progress in a patient who recovered from lobar pneumonia is illustrated in Figure 1. The downward trend of the curve of the nonfilament percentage to a final figure of 11 and the upward trend of the small lymphocyte percentage to a final figure of 31 is typical of the behavior of the nonfilaments and small lymphocytes in recovery from infections.

The percentage of nonfilament neutrophils is elevated in every instance where there is active infection, while the percentage of small lymphocytes is depressed.

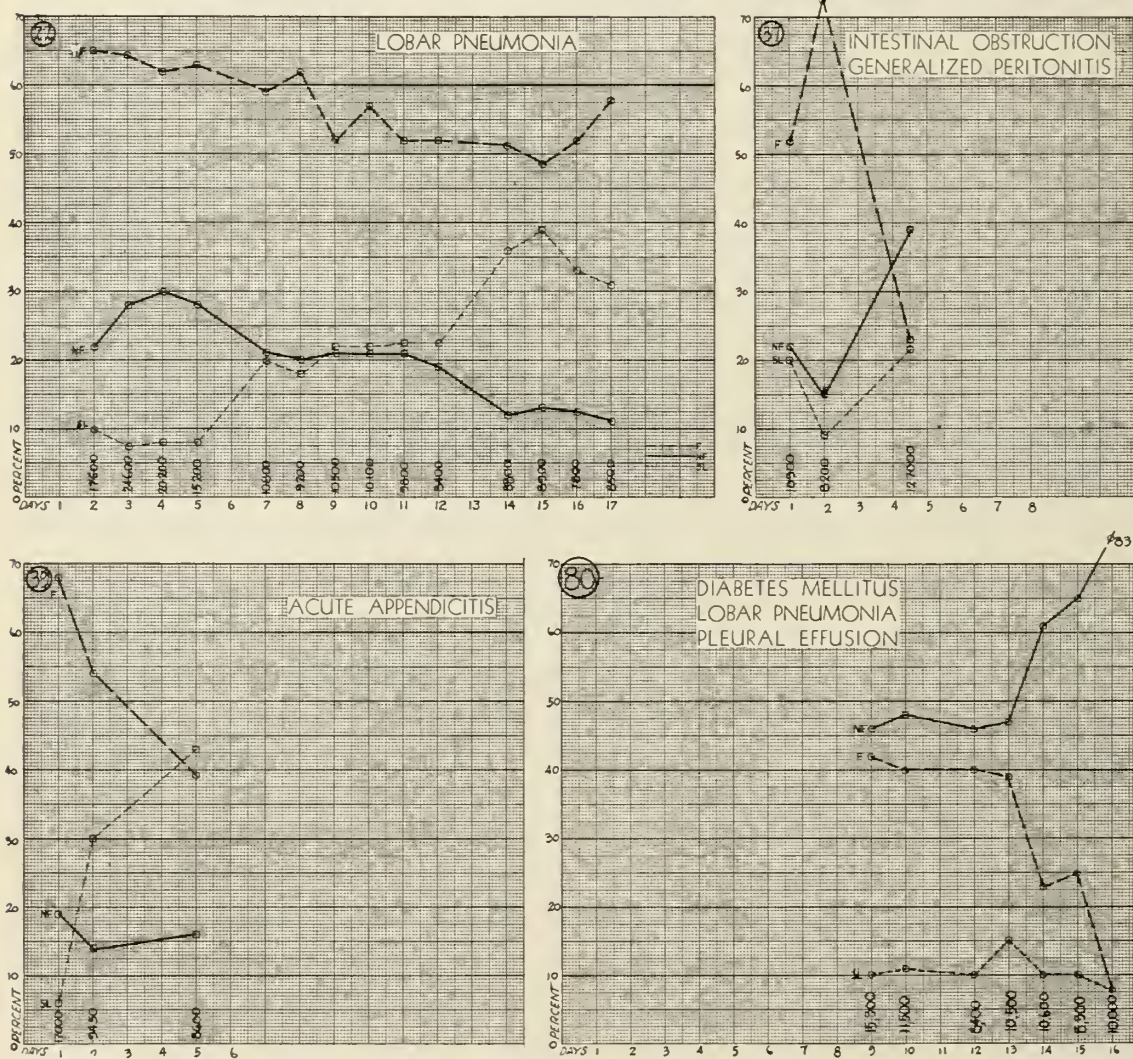
With recovery, the total white count falls, the nonfilament percentage returns within the normal range, and the small lymphocyte percentage shows a marked increase. Where recovery does not occur, the total white count changes but little, the percentage of filamentous neutrophils is either depressed or remains unchanged, while the percentage of nonfilaments either stays at the same level, or shows a gradual or abrupt increase, attaining at times a level above 50 per cent. This latter finding, *viz.*, a nonfilament percentage of fifty or more, is associated with grave conditions and should caution the clinician against issuing a favorable prognosis. The small lymphocyte percentage usually remains depressed in these cases.

Of the five patients who died of lobar pneumonia, four showed the expected increase in the nonfilament cells, two of them

showing percentages of 57 and 62. One, patient 24, showed, with improvement of the pneumonia, a drop in the non-filament percentage from 23 to 12 on the fourth day of illness, yet he died suddenly on that day of cardiac failure. He had been under treat-

immediately following bronchoscopic drainage of the abscess on the twenty-fifth day of his illness.

Patients 34 and 35 suffered from traumatic hemothorax secondary to rib fractures. It will be noted that the first patient,



Graphs of cases listed in Tables I to V. Case number in upper left hand corner.

ment for an undetermined cardiac condition during the preceding month.

The patients with bronchopneumonia showed essentially the same reactions as those with lobar pneumonia.

Patient 30, who had bronchopneumonia complicating a lung abscess, was observed over a long period of time. Although not recorded here, it was interesting to note the drop of the nonfilament and the rise of the small lymphocyte and filament percentages

who had six fractured ribs, also had a compound fracture of the left frontal sinus and consequently showed a nonfilament percentage of 32. The second patient, who had no complicating infection, showed a nonfilament percentage of only 15.

III. ABDOMINAL INFECTIONS

This was the largest group of patients studied. It will be noted that the patients with simple acute appendicitis had total

TABLE III.—ABDOMINAL INFECTIONS

Diagnosis	Initial count				Final count				
	WBC	F	NF	SL	WBC	F	NF	SL	Progress
36. Empyema of gall-bladder.....	12,500	59	33	8	18,200	56	33	8	Died
37. Intestinal obstruction; peritonitis.....	10,900	52	22	20	12,700	23	39	22	Died
38. Perforated duodenal ulcer.....	16,300	70	16	9	8,400	75	9	7	Recovered
39. Acute appendicitis.....	17,000	68	18	6	8,600	38	16	43	Recovered
40. Acute appendicitis.....	13,100	45	16	35	8,900	51	16	31	Recovered
41. Acute appendicitis.....	8,800	55	12	30	10,000	46	16	36	Recovered
42. Acute appendicitis.....	17,200	56	30	12	9,500	45	11	46	Recovered
43. Acute appendicitis.....	17,400	62	23	9	9,800	70	8	20	Recovered
44. Acute appendicitis.....	11,900	50	31	19	8,500	50	14	35	Recovered
45. Acute purulent appendicitis.....	9,800	52	16	28	8,500	60	9	30	Recovered
46. Appendiceal abscess.....	19,400	36	29	33	8,600	39	16	40	Recovered
47. Acute perforative appendicitis.....	20,100	55	35	2	8,800	38	13	43	Recovered
48. Acute suppurative appendicitis.....	24,000	50	32	13	25,000	47	49	12	Died
49. Acute gangrenous appendicitis.....	21,700	57	37	2	9,200	49	16	35	Recovered
50. Acute gangrenous appendicitis.....	18,100	51	30	12	7,100	37	13	48	Recovered
51. Acute ruptured gangrenous appendicitis.....	23,900	53	40	2	13,900	42	23	29	Died
52. Acute gangrenous appendicitis.....	38,000	35	42	22	10,500	31	7	59	Recovered
53. Acute perforative appendicitis.....	22,000	56	32	9	9,600	61	12	20	Recovered
54. Acute perforative appendicitis.....	27,800	—90—	—	2	10,900	31	54	15	Died
55. Acute gangrenous appendicitis.....	20,400	59	28	10	9,300	59	10	27	Recovered
56. Acute gangrenous appendicitis.....	21,400	53	27	12	8,800	44	12	38	Recovered
57. Acute gangrenous appendicitis.....	9,400	55	25	18	7,600	55	14	28	Recovered
58. Acute gangrenous appendicitis.....	16,800	63	19	17	7,800	55	15	19	Recovered
59. Acute gangrenous appendicitis.....	17,500	52	40	8	7,100	43	20	25	Recovered
60. Subacute appendicitis.....	15,900	61	26	8	7,600	66	11	20	Recovered
61. Subacute appendicitis.....	8,300	52	20	28	14,900	68	12	25	Recovered
62. Chronic catarrhal appendicitis.....	19,500	55	23	13	.....	.....	.....	.....	Recovered
63. Chronic catarrhal appendicitis.....	8,300	49	28	22	8,200	48	20	28	Recovered
64. Chronic catarrhal appendicitis.....	12,300	38	50	12	8,500	56	12	30	Recovered
65. Chronic catarrhal appendicitis and fibroid uterus.....	8,600	57	4	38	9,200	62	12	22	Recovered
66. Chronic catarrhal appendicitis.....	11,700	59	20	17	8,400	45	16	32	Recovered
67. Chronic appendicitis.....	8,400	60	9	30	8,500	57	12	22	Recovered

TABLE IV.—PELVIC INFECTIONS

68. Chronic pelvic inflammatory disease.....	16,500	56	21	21	9,500	47	16	35	Improved
69. Incomplete abortion.....	12,100	58	23	10	8,800	53	13	23	Recovered
70. Induced abortion and acute salpingitis.....	9,500	52	34	12	8,700	57	11	28	Recovered
71. Subacute right salpingitis.....	8,600	58	18	24	7,300	45	20	34	Improved
72. Chronic salpingitis.....	11,300	53	28	15	.....	.....	.....	.....	Recovered
73. Tubercular salpingitis.....	13,750	57	23	20	9,600	47	16	30	Recovered
74. Acute salpingitis.....	9,800	62	20	12	8,800	50	12	32	Improved
75. Chronic endocervicitis and endometritis.....	8,000	62	12	21	7,800	52	12	32	Improved
76. Chronic endocervicitis and appendicitis.....	10,900	62	22	10	9,700	57	20	23	Recovered
77. Ruptured ectopic pregnancy.....	12,000	38	19	37	11,400	40	17	39	Improved
78. Ovarian cyst with twisted pedicle.....	15,300	73	12	5	10,000	43	15	35	Recovered

white counts that did not exceed 17,400, while those with abscess, perforation or gangrene of the appendix had much higher total white counts. Those that recovered showed the usual recession of the nonfilament neutrophils and the increase in the small lymphocytes, while those that died showed the reverse picture. Convalescence was preceded in every instance by a sharp rise in the percentage of small lymphocytes. This observation we have found of great significance in following the progress of the infection.

Patient 37, with generalized peritonitis

and intestinal obstruction (Fig. 2), showed the typical rise in the nonfilament percentage with death on the fourth day following operation. The sedimentation time on the first day, coincident with the count, was 1 hour and 30 minutes, and on the second day 2 hours and 30 minutes.

Patient 39 (Fig. 3), illustrated to a nicety the value of the filament-nonfilament count. Operation in this case was safely deferred because of the satisfactory progress indicated by the count.

Patient 57 showed on admission a total white count of only 9,400, yet the nonfila-

TABLE V.—MISCELLANEOUS CONDITIONS

Diagnosis	Initial count				Final count				
	WBC	F	NF	SL	WBC	F	NF	SL	Progress
79. Carbuncle; septicemia; diabetes.....	8,000	60	14	21	14,700	66	22	7	Died
80. Diabetes; pneumonia; pleural effusion	15,300	42	46	10	10,000	8	83	8	Died
81. Chronic pyelonephritis and myocarditis; prostatic hypertrophy.....	14,300	56	25	19	15,600	63	29	5	Died
82. Chronic nephritis; rheumatic heart.....	11,400	78	9	12	8,600	52	23	20	Died
83. Acute cervical cellulitis and adenitis.....	15,500	45	18	34	10,700	45	16	36	Recovered
84. Acute cervical adenitis.....	10,800	31	15	45	10,600	19	7	70	Recovered
85. Grippe	9,600	49	19	23	.....	.....	.....	.....	Recovered
86. Influenza and acute bronchitis.....	14,300	52	23	7	8,000	41	14	39	Recovered
87. Acute otitis; streptococcal pharyngitis	16,300	47	22	24	10,400	44	12	35	Recovered
88. Acute mastoiditis.....	10,900	39	28	31	10,900	49	18	31	Improved
89. Scarlet fever.....	11,500	50	30	17	.....	.....	.....	.....	Recovered
90. Scarlet fever.....	8,300	68	14	16	.....	.....	.....	.....	Recovered
91. Diphtheria, nasal.....	12,500	70	18	9	.....	.....	.....	.....	Recovered
92. Diphtheria, pharyngeal.....	12,100	62	19	18	.....	.....	.....	.....	Recovered
93. Tonsillitis, acute follicular.....	9,400	60	19	19	8,200	50	18	29	Improved
94. Typhoid fever; intestinal hemorrhage	6,200	31	33	27	7,600	31	20	44	Improved
95. Multiple neuritis.....	7,800	48	38	13	9,900	43	14	32	Unimproved
96. Antepartum pyelitis and cystitis; post-partum acute bronchitis.....	23,800	40	55	7	10,500	44	17	37	Recovered
97. Acute infectious polyarthritis.....	8,300	56	17	21	6,700	49	14	29	Improved
98. Cerebral concussion; scalp abrasion.....	11,100	57	32	9	9,700	64	15	15	Recovered
99. Right inguinal herniotomy.....	8,500	42	30	24	8,400	64	12	21	Recovered
100. Duodenal ulcer; chronic phlebitis.....	8,400	64	18	15	.....	.....	.....	.....	Unimproved

ment percentage of 25 indicated an active infection and demanded operative intervention.

Patient 64, with symptoms of one day's duration, showed an initial nonfilament percentage of 50, indicating a severe type of infection, but made an uneventful recovery.

IV. PELVIC INFECTIONS

None of the eleven patients in this group showed high total white counts. The nonfilament percentage was not unusually elevated, nor were the small lymphocytes remarkably depressed.

Patient 68, with chronic pelvic inflammatory disease, showed an initial sedimentation time of 35 minutes, and final sedimentation time of 50 minutes. She made an uneventful recovery under treatment by injections of foreign protein.

Patient 74 improved under the same type of treatment.

Patient 71, although showing considerable improvement, was discharged from the hospital with evidence of mildly active right salpingitis as substantiated by the persistent elevation of the nonfilament percentage to 20.

V. MISCELLANEOUS CONDITIONS

In this group are included a wide variety of conditions, most of them infections.

Patient 80, with diabetes complicated by

pneumonia with massive bilateral pleural effusion (Fig. 4), showed a striking rise to a terminal nonfilament percentage of 83. The abruptly rising curve was indicative of an increasing toxemia and its continued rise beyond 50 per cent predicted the fatal outcome accurately.

Patients 81 and 82 again showed that a fatal outcome is attended by a rise in the nonfilament percentage.

Patient 84, a white male, age 11 months, suffering from acute purulent cervical lymphadenitis, showed, with recovery, a rise in the small lymphocyte percentage to 70. This illustrates the high percentage that may be attained by this type of cell with convalescence.

Patients 89 and 90, both suffering from scarlet fever, showed relative nonfilament percentages of 30 and 14. The nonfilament percentage in each instance was directly proportional to the severity of the illness.

Patient 96, with antepartum pyelitis, was delivered on the fourth day following admission, the count at that time being 11,900, filaments 42, nonfilaments 16, small lymphocytes 38. Twenty-four hours later the total white count was 11,000, filaments 49, nonfilaments 35 and small lymphocytes 2. The patient had developed what was diagnosed as acute bronchitis. Here, again, was exemplified the typical reaction to infection with an increased nonfilament percentage

and a marked depression of the small lymphocyte percentage.

CONCLUSIONS

From the study conducted on 100 patients, we have found that:

1. The determination of the percentages of the nonfilamentous and filamentous neutrophils, lymphocytes, monocytes, eosinophiles, and basophiles by counting 100 consecutive leukocytes, lends itself readily for routine clinical use.

2. Much may be learned as to diagnosis, prognosis and treatment by the use of this method of studying the blood picture. Changes in the percentage of the young polymorphonuclear neutrophils (nonfilaments) often precede changes in the physical signs and symptoms as well as total cell count changes. In the absence of clinical symptoms, nonfilament deviations from the normal should not be ignored.

3. In acute clinical conditions, where the percentage of nonfilamentous neutrophils does not exceed 16, it may be safely assumed that no infection is present.

4. A nonfilament percentage of 50 or over is indicative of a poor prognosis.

5. Failure of the nonfilament percentage

to return to the normal level of 8 to 16 is a sign of persisting infection.

6. The percentage of small lymphocytes is depressed during the acute stage of an infection and rises with recovery, in many instances preceding the onset of convalescence and running parallel with it.

7. Because of the ease with which it can be performed and because of its great value to the clinician, the filament-nonfilament count should be adopted as a routine procedure in place of the ordinary differential count.

613 PROFESSIONAL BLDG.

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REPORT OF A SERIES OF CASES OF BOUGIE AND BAG INDUCTIONS OF LABOR*

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The obstetrician is faced with the problem of induction of labor in the interests of the mother or child, or both, in about 3 per cent of his cases. In general, there are four groups of cases considered: firstly, the group consisting of the toxemias of pregnancy; secondly, those cases of disproportion between the passenger and passage; thirdly, those cases complicated by hemorrhage, and, fourthly, those cases of pregnancy complicated by pulmonary or cardiac diseases. The method selected should imitate the processes of nature as closely as possible and should minimize the risk of both mother and child. We must realize, however, that patients upon whom we resort to induction of labor are pathologic and that, therefore, a normal labor is not likely to result.

Louise Bourgeois,¹ a midwife, was the first one to induce premature labor. This was in 1608. Because of the frightful mortality incident with cesarean section in the

eighteenth century a conference was called and met in London in 1756. At that time Denmon suggested induction of premature labor by means of rupturing the membranes. Macauley, of London, was the first to perform this operation. Barnes in 1852 introduced an hour-glass shaped rubber bag with a stop-cock. Krause in 1855 presented the method of induction of labor by means of

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introducing into the uterus a flexible bougie. De Ribes in 1888 invented the bag which today bears his name and its employment enjoys considerable popularity in many hospitals. Many drugs have been introduced for induction of labor but most of these have fallen by the wayside with the exception of castor oil, quinine and the various pituitary extracts.

Upon reviewing the literature we find that clinicians are not agreed as to the efficiency of the various methods employed in inducing labor, nor are clinicians agreed as to the maternal and fetal morbidity and mortality in cases of induced labors.

Morton,² after reviewing 160 cases of induction of labor by employment of the hard rubber bougie method, states that in 82.5 per cent of the cases this method resulted in success; 72.7 per cent of these cases delivered spontaneously. In this series the majority of cases of fetal deaths occurred in the cases of toxemia of pregnancy and cases of prematurity. He says: "The bougie is superior to the bag for the induction of labor provided a sufficiently large bougie is employed and the bougie should be employed whenever haste is not essential. The bag is more efficient in bringing about the onset of labor, but it is attended by a definitely greater fetal mortality and maternal morbidity. When fetal death follows the use of the bag it is usually the result of prolapse of the cord. Maternal mortality is the same with either method."

In 1919, Reis³ reported a series of 500 consecutive cases of induced labor in 430 patients. These inductions were undertaken as a means of comparing the various methods of induction of labor now being employed. All of his cases were above the thirty-eighth week. His observations revealed pituitrin alone to be the least efficient—31 per cent. Employment of castor oil alone resulted in 67 per cent success. Castor oil and quinine resulted in 90 per cent success. Introduction of a bag produced labor in 92 per cent of the cases. Reis believes that the incidence of operative delivery is not affected by induction of labor as 73.5 per cent of his cases delivered spontaneously. In his series of cases, the gross morbidity, exclusive of bags, was 11.3 per cent and the corrected morbidity was 2.8 per cent.

In a series of 240 cases of induction of labor at the Royal Victoria Hospital, Mon-

treal, introduction of a bag was resorted to in 86 per cent of the cases and the bougie in 14 per cent of the cases. From these cases Fletcher⁴ concluded that: "In primiparæ the time taken for induction by either method was doubled in comparison with multiparæ." Reis, on the other hand, believes that the response in each group is about equal.

This paper deals with a review of fifty cases of bougie induction of labor and twenty cases of bag induction of labor at the University of Michigan Hospital.

Of the fifty cases of bougie induction of labor twenty-seven were in multiparæ and twenty-three were in primiparæ. Considering the twenty-seven multiparæ we found the most common indication of induction of labor was toxemia of pregnancy, eighteen cases of our series being induced because of that complication. Four cases were induced because of eclampsia and one case each because of pregnancy complicated by severe diabetes, placenta previa, advanced pulmonary tuberculosis, ventral hernia with intestinal obstruction and subacute bacterial endocarditis. Of this series five were before the twenty-eighth week of gestation; fifteen were between the twenty-eighth and thirty-fourth week of gestation and seven after the thirty-fourth week. The bougie was in the uterus on the average of eleven hours. The average length of labor was eleven hours and ten minutes. There were twenty-three successful cases or a percentage of 85.2 per cent. Of the twenty-seven cases there were four morbid cases, a temperature of 100.4° F. for two consecutive days following delivery being considered morbid. However, one of these cases entered the hospital with a temperature of 100.4° F. due to subacute bacterial endocarditis. In another case version and extraction were resorted to because of a transverse presentation. The corrected morbidity, therefore, becomes 7.47 per cent. There were two maternal deaths in this group, making a maternal mortality of 7.47 per cent. One of these deaths was attributed to puerperal septicemia. Autopsy on this patient revealed post-partum diphtheritic endometritis due to retained membranes. The other fatality occurred four days following delivery after many eclamptic convulsions. In this group of twenty-seven cases there were seven fetal deaths. Of these, three were nonviable.

BOUGIES

	Multiparæ	Primiparæ	Average
Av. Hrs. Bougie In.....	11 hours	16 hours	13 hours 30 min.
Av. Hrs. Labor.....	11 hours 18 min.	18 hours	14 hours 39 min.
Failures (4).....	14.8 %	17.39%	16.09%
Morbidity corrected.....	11.11%	17.39%	14.25%
Mortality (maternal).....	7.5 %	4.34%	5.87%
Mortality (fetal).....	14.8 %	17.39%	16.09%
Operative Interference.....	11.11%	8.69%	9.9 %

BAGS

	Multiparæ	Primiparæ	Average
Av. Hrs. Bag In.....	5 hours 48 min.	7 hours 45 min.	6 hours 45 min.
Av. Hrs. in Labor.....	7 hours 30 min.	14 hours 30 min.	11 hours
Failures.....	None	10%	5%
Morbidity.....	20%	10%	15%
Mortality (maternal)	None	None	None
Mortality (fetal).....	10%	30%	20%
Operative Interference.....	10%	40%	25%

Excluding the three nonviable deaths the fetal mortality rate becomes 14.8 per cent. The remaining four cases were all stillborn; of these, three were just at twenty-eight weeks and one at thirty-four weeks. Three were in cases of eclampsia and one in a case of pre-eclampsia. The incidence of operative interference was not increased as 88.89 per cent of the cases delivered spontaneously. In the cases of operative interference all the babies survived.

Upon reviewing the twenty-three cases of induced labor in primiparæ we found the most common indication of induction was toxemia of pregnancy, fourteen out of the 23 cases having been induced because of that condition. Seven cases were induced because of eclampsia. One case was induced because of acute yellow atrophy of the liver and one because of pyelitis of pregnancy. Of the twenty-three cases, four were induced between the twenty-eighth and thirty-fourth week of gestation. In this group of cases the bougie was in the uterus on an average of sixteen hours. The average length of labor was eighteen hours. There were nineteen successful inductions giving a percentage of 82.6 per cent success. Of these cases there was a total morbidity of 52.17 per cent. However, the morbidity in one case was attributed to a major pulmonary embolus with infarction; in three cases the morbidity was attributed to kidney infection and in four cases operative interference was resorted to so that the corrected morbidity becomes 17.39 per cent. There was one maternal death due to acute yellow atrophy of the liver. The maternal mor-

tality in this group, therefore, is 4.34 per cent. There were eight fetal deaths in this group. Four of these were non-viable. This gives a fetal mortality of 17.39 per cent. The remaining four cases of fetal deaths were all stillborn; three of these were in patients with eclampsia between the thirty-second and thirty-fourth week of gestation, and one in a patient with pre-eclampsia at the thirty-second week of gestation. There were two cases of operative interference so that the percentage of spontaneous deliveries in this group becomes 91.31 per cent.

Of the twenty-cases of bag induction there were ten multiparæ and ten primiparæ.

Considering the ten cases of induction of labor in multiparæ we found that three were in patients who were post term and who had contracted pelvis; one was a case of eclampsia; one of pregnancy complicated by manic depressive insanity; one of pregnancy complicated by pulmonary tuberculosis and one in placenta previa. Seven of these cases were induced between the twenty-eighth and thirty-sixth week of gestation and three after the thirty-sixth week of gestation. The bag was in the uterus on an average of five hours and 50 minutes. The average length of labor was seven hours and 30 minutes. There were no failures in this group. There was a total morbidity of 30 per cent. However, the morbidity in one case was attributed to advanced pulmonary tuberculosis so that the corrected morbidity is 20 per cent. There were no maternal deaths. There was one fetal death. This

was a case of placenta previa. The labor was terminated by version and extraction. The fetal mortality, therefore, in this group is 10 per cent. Ninety per cent of these cases delivered spontaneously.

Of the ten cases of bag induction of labor in primiparæ, four were in patients who were post term; three were in cases of pregnancy complicated by toxemia; two were cases of eclampsia and one was induced because of low implantation of the placenta with bleeding. Five cases were induced between the twenty-eighth and thirty-sixth week of gestation and five after the thirty-sixth week. The bag was in place on an average of seven hours and 45 minutes. The average length of labor was fourteen hours and 30 minutes. The bag was successful in inducing labor in 90 per cent of these cases. The total morbidity of this group was 50 per cent. However, in one of the morbid cases dilatation of the cervix was completed manually and a mid-forceps application resorted to; one was in a case complicated by a severe postpartum hemorrhage which was controlled by packing the uterus with gauze; one was in a patient in whom the morbidity was attributed to mastitis and one in a patient whose labor was terminated by a mid-forceps application because of prolapse of the cord. The corrected morbidity, therefore, becomes 10 per cent. There were no maternal deaths in this group of ten primiparæ. There were three fetal deaths or a percentage of 30 per cent. These were all stillborn; one of these fetal deaths was attributed to prolapse of the cord; one was

due to syphilis and the third occurred in a case of severe toxemia of pregnancy. In the latter case the fetal heart was not heard at the time of introduction of the bag. Sixty per cent of this series of cases delivered spontaneously.

The number of cases reviewed is too small to warrant the drawing of definite conclusions but the above review indicates that:

1. Multiparæ respond to bougie induction of labor in a slightly greater percentage of cases than do primiparæ.

2. Multiparæ respond to bag induction of labor in a definitely greater percentage of cases than do primiparæ.

3. The bag is a more rapid method and a more certain method of inducing labor than is the bougie.

4. The morbidity in bag induction of labor is slightly greater than in the bougie method.

5. The fetal mortality is greater in bag induction of labor than in the bougie method.

6. The incidence of operative interference is not increased in labors induced by the bougie method.

7. The operative interference incident with bag induction of labor is nearly three times as great as in cases induced by the bougie method.

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RELATIONSHIP OF THE PRIVATE MEDICAL PRACTITIONER TO PREVENTIVE MEDICINE

Sir Arthur Newsholme, Birmingham, England, outlines briefly developments and changes during recent decades, in Europe generally and particularly in Britain, in preventive as related to clinical medicine, and the influence of this altered orientation on the work of the private medical practitioner. His sketch of European developments is prefaced by the following postulates: 1. Neither instructed public opinion nor the medical conscience, which in this connection is the advance-guard of Christian civilization, can tolerate the continuance of neglected sickness. 2. Medical care in its widest sense must be made available for all, as an important element in securing maximum efficiency and happiness in a civilized community. 3. Gaps and imperfections in present medical services must be made good and medical care must be of a quality which does not lack in any essential respect all that is necessary for expeditious recovery or for comfort, if recovery is

unattainable. 4. Health is worth whatever expenditure is efficiently incurred in its maintenance or to secure its return. 5. In present circumstances, both in America and in Europe, adequate scientific medical service has become unattainable by isolated or family effort standing alone, for a high proportion of the total population. 6. For a large portion of the total sick population measures must be, and in part are already, organized to assist in providing necessary medical services, the sources available being private charity, communal taxation, and provident insurance for future needs. 7. There is need to organize such coöperative work as will secure that specialism, which necessarily is concerned mainly with the disease, is not allowed to submerge the wider and wiser outlook of the general practitioner who is concerned with the patient himself. 8. There is often needed a study of the patient from a psychic, social, economic and occupational standpoint, if his illness is to be accurately diagnosed and satisfactorily treated. 9. Modern medicine is becoming increasingly physiologic and decreasingly pathologic.—*Journal A. M. A.*

ACTINOMYCOSIS PRIMARY IN OVARY*

CASE REPORT

C. E. BOYS, M.D., F.A.C.S.

KALAMAZOO, MICHIGAN

A farmer's wife, thirty-six years old, the mother of six children, aged sixteen to six, was admitted to Sturgis Memorial Hospital December 26, 1929. She entered the hospital rather reluctantly, feeling that she was not sick enough to warrant hospitalization. One month before this date she had accidentally felt a bunch in the lower abdomen for the first time, and this had been preceded by a few days of pelvic pain of only moderate severity. The patient had always been very well and able to do the usual work of a farmer's wife, except when she had a severe attack of influenza in 1918.

Parents were living and well at seventy-three and seventy-one respectively. She had two brothers living and well, but one brother had died of pneumonia and one of tuberculosis in early adult life. She also had five sisters living besides one who died at fourteen years of age from heart trouble.

Examination showed the patient to be a woman of average stature and nutrition but showing a moderate degree of anemia. Pulse 100. Temperature 99.6. Respiration 20. The general examination was negative except for the following:

1. A moderate sized diffuse enlargement of the thyroid which was of a soft consistency.

2. A hard egg-sized mass in the anterior abdominal wall about half way between the umbilicus and pubis. The mass was rather freely movable and seemed to be a part of a larger mass which could be palpated in the pelvic region. This deeper mass was only moderately tender and suggested a fibroid.

3. The cervix was much hypertrophied but not grossly malignant. The uterus was three or four times normal size and seemed to become a part of a larger mass filling the cul-de-sac. Urine examination showed no pathology. Blood examination was not made. A tentative diagnosis of fibroid of uterus was made and operation for same was advised.

On opening the abdomen by median suprapubic incision it was discovered that the mass previously palpated was a very hard egg-sized tumor, evidently having its origin in the omentum, then later invading the parietal peritoneum, the deep fascia and extending nearly through the rectus muscle. It also extended inwardly through the serous coat of the colon. The lower edge of the omentum was firmly adherent to a pelvic mass.

The uterus was four or five times normal size, apparently from subinvolution, but the appearance was otherwise normal. There was a lemon-sized abscess of the left tube and ovary, surrounded completely by a loop of inflamed sigmoid. This contained thick odorless yellow pus not unlike that often found in pyosalpinx. The adhesions were notably tough and separated with unusual difficulty. The right tube and ovary were normal. The appendix was large and kinked but otherwise normal. There were no nodules in the liver, mesentery or elsewhere in the peritoneum.

At this time a diagnosis of cancer of the omentum invading the abdominal wall, and pyosalpinx, was made. The incision was extended upward about the tumor, removing it entirely. The mass was with difficulty separated from the colon without entering the deeper layers. A supravaginal hysterectomy with removal of the left tube and ovary was also done. Two large rubber tissue drains were placed down to the cul-de-sac and the wound then closed with much difficulty on account of the width of tissue removed with the tumor.

The patient made the usual recovery of a pelvic drainage case except that the wound discharged some

at the point of drainage for five or six weeks. She left the hospital in three weeks.

It was not until the pathological report was returned by Dr. A. S. Warthin a few days after operation that the true nature of the condition became known. The report read as follows: "Tissue from abdominal wall shows multiple subacute abscesses containing colonies of actinomyces—actinomycosis. Uterus shows slight glandular and interstitial hyperplasia of endometrium with chronic infection. Multiple chronic tubo-ovarian abscesses with colonies of actinomyces—actinomycosis. The abscesses are in the ovary and on the broad ligament rather than in the tube. Prognosis in this case is very grave. This patient is liable to develop a pyemic actinomycosis."

As soon as this diagnosis was received, the patient was given potassium iodide regularly, both before and after leaving the hospital. A report was received from the family physician on March 3, 1930, stating that the patient was still very weak; had been in bed most of the time since leaving the hospital, and that potassium iodide had been administered up to seventy-five grains a day until one week previous, when it was discontinued because of a severe attack of diarrhea accompanied by violent rhythmic colicky pain in the region of the gall-bladder. There then gradually developed nausea and vomiting and marked abdominal distension. These symptoms became so violent and unremitting that she was returned to the hospital on March 27, 1930, thirteen weeks after the first operation.

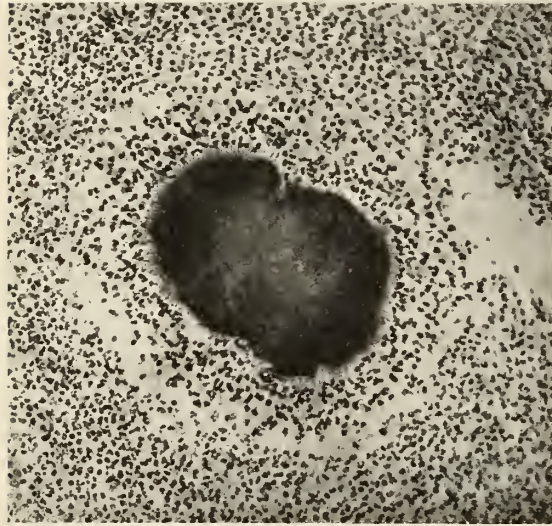
On this date the patient looked very ill. The pulse was 140 but regular. The abdomen was tympanitic throughout and was undulating with peristaltic waves. No palpable masses and very little tenderness were present. Bimanual examination showed the cervix to be fixed with extraordinary firmness but no pelvic masses were palpable. There was a moderate degree of pallor to skin but no cachexia or jaundice. The original wound was closed and dry. A diagnosis of incomplete intestinal obstruction in the large bowel was made.

On opening the abdomen at this time it was noted that all intestines were greatly distended with gas down to the lower sigmoid, where obstruction was effected by unusually tough adhesions at the site of the original tubo-ovarian abscess. The intestinal walls were smooth, of normal color and free from edema. A walnut sized nodule was found in the omentum under the left diaphragm. No other nodules were found. On section the nodule showed hard, glistening, white, cut surfaces grossly having the appearance of carcinoma. There was no visible

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pus. The abdomen was closed without drainage after the subdiaphragmatic nodule, the right tube and ovary were removed, and the pelvic adhesions released as well as possible.

Four stormy post-operative days were followed by death. A post-mortem examination—abdomen only—was made soon after death. The wound had com-



Colony of actinomyces in abscess. Author's case. Photomicrograph by Dr. A. S. Warthin.

pletely separated except as held together by the skin sutures. There was a yellowish sero-purulent exudate throughout the whole abdomen, with accumulations in the pelvis. There was an abscess at the site of the subdiaphragmatic nodule evidently incompletely removed at the last operation. This was apparently the source of the generalized peritonitis. The intestines were enormously distended with gas but no obstruction was present. Dr. Warthin's report on the examination of the nodule was as follows: "Chronic purulent omentitis—omental abscess. Probably actinomycotic but no colonies are present. Cystic follicles in ovary."

There are several reasons for reporting this case. The first is the rarity of actinomycosis involving the female genitalia. Helwig⁸ reports only thirty cases found in the literature up to 1925. In these he observed that the ovaries alone were involved in only twelve instances, the ovaries and tubes in four, the tubes alone in four, and the remainder in various combinations. Barth¹ in 1928 quotes Nurenberg, who had at that time collected all the reported cases of actinomycosis of the female genital tract or its parts, and he was able to find but fifty. Undoubtedly many others passed by unrecognized on account of their similarity to other more common conditions. The number is sufficient, however, to warrant more care in its recognition.

Another reason is the similarity of actinomycosis in its *early* stage to malignancy.

In this case a post-operative diagnosis of malignancy was made until the pathological report was returned. Boyd² mentions this similarity in his Surgical Pathology. Helwig, Soderlund and several other authors have made the same observation. The density, toughness and white, hard, glistening cut surfaces, as well as its tendency to invade tissues and to become fixed, suggest this point. *Late* in its course it is very similar to ordinary tubal abscess. Grossly the pus usually cannot be differentiated. The color, consistency and amount may be not unlike those of the commoner infections, and even the odor may be that of the colon bacillus because of mixed infection.

A third reason is the extraordinary toughness found in the adhesions from actinomycosis. This is due to its pronounced tendency to cause proliferation of connective tissue.

The late arrival of symptoms is noteworthy. This patient did not consider herself seriously ill, nor was this thought justified by her physical findings, yet the disease was even then far advanced. Symptoms may be present from two weeks to thirteen years, usually from three to twelve months.

Considerable speculation exists as to the mode of entrance. Hazelhorst reports a case where the infection was apparently introduced by a curet which punctured the uterus during a curettage for post-abortive endometritis. Most observers agree with Wolff and Israel,¹³ however, that the organism is probably endemic in the flora of the intestine and only becomes manifest when it invades the muscular or serous coat through an abrasion in the mucosa. Further, that it extends by invasion and by the blood stream, but rarely if ever by the lymphatics; this latter being a strong differential point in contrast to tuberculosis and malignancy.

Sixty per cent of actinomycosis cases occur in neck and head; twenty per cent in gastro-intestinal tract; fifteen per cent in lungs; and five per cent in skin. Most of the abdominal cases appear in the appendix. Hüffer⁹ states that most pelvic involvement comes from the appendix through its contiguity with the uterine adnexæ. In our own case the ovary, on account of its matured abscess and the negative microscopical findings in the tube, undoubtedly was the primary focus. Whether it entered through the blood stream or sigmoid could not be demonstrated. The adherent sigmoid might

have been the portal of entrance to the enveloped ovary, and on the other hand the sigmoid may have been only inflamed secondarily from the tubo-ovarian abscess. The appendix showed no evidence of involvement.

The veins of the adherent omentum probably were the routes of spreading from the ovary to the omentum, whence it progressed by direct invasion well into the abdominal wall. That the omental nodules were younger is suggested by the fact that they were hard and pusless on section at a time when the ovary had become a well developed abscess. Entrance by way of the genital tract can reasonably be excluded in this case as there was no involvement of the uterus or tubes on microscopical section.

Noteworthy in this case is the failure of potassium iodide to cure or to prevent the advancement of the disease even though the drug was administered in quantities up to seventy-five grains a day. Harbitz and Grandel⁷ showed that potassium iodide up to two per cent in culture media failed to inhibit growth of actinomycosis bovis. The drug has nevertheless been used by practically all writers, although very few of them depend upon it solely. Both Coller³ and Sistrunk¹² give as much as two hundred grains three times a day.

Desjardins⁴ considers radiology the most important therapeutic agent but also gives the iodide. New and Figi¹⁰ advise the drug but advise it to be accompanied by drainage and radiology. Radiology is also approved by Shugt.¹¹ Sistrunk¹² advises opening the abscess widely, packing it firmly with iodiform gauze, after swabbing it out with tincture of iodine. This pack is left in eight or ten days to insure against early closure of the opening. He then gives the iodide as stated above and also uses X-ray.

Other remedies have also been used, such as methylene blue, copper salts, arsphenamine and vaccines. Epstein⁵ used non-specific protein therapy consisting of intravenous administration of typhoid and paratyphoid alpha and beta vaccines. This case improved and remained so although it had previously been treated by potassium iodide, X-ray and surgical drainage without appreciable benefit.

Geymuller⁶ has used yatren-casein (iodoxyquinoline-sulphonic acid). The number of curative agents used, however, argues against the specificity of any one of them.

The nature and course of the disease are of interest. Four stages may be described:

1. Tumefaction—hard, fixed masses without the usual signs of inflammation.

2. A later softening with abscess formation; the tissues here resembling a sponge saturated with pus.

3. Sinus formation follows the development of the abscesses.

4. Steady progression of the disease with the development, in the late stages, of the symptoms of chronic infection, namely fever, anemia, wasting and death.

Actinomycosis is a slow worker and a prolific fibrin producer, forming tough adhesions. It is a very fatal disease. In the thirty-three cases collected by Helwig,⁸ twenty-three patients died and only ten were reported as recovered. Secondary bacterial invasion is a favorable occurrence as actinomyces are very susceptible to bacteria and are killed by them. The best known cure is complete surgical removal; but this is often impossible, as in our own case, because the diagnosis frequently cannot be made until the disease has progressed beyond the limits of surgical possibilities.

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SPINAL ANESTHESIA IN CASES OF EMERGENCY SURGERY

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This paper presents a number of surgical emergency cases of more or less serious nature which have been operated upon under spinal anesthesia. The reaction of these cases to the anesthetic was studied.

The material was selected from the cases admitted to the Surgical Service at the Detroit Receiving Hospital during the period of a year (July, 1929-1930). The cases were distributed as shown in Table I.

TABLE I

Appendicitis, acute, simple.....	55
Appendicitis with perforation and peritonitis.....	30
Appendiceal abscess	13
Intestinal obstruction, incarcerated hernia.....	23
Intestinal obstruction, other causes.....	18
Acute visceral trauma (gunshot, stab, contusion).....	52
Acute perforated gastric or duodenal ulcer.....	21
Acute ectopic pregnancy.....	2
Crushing amputations, lower extremities.....	3
B. Welchii infections, lower extremities.....	3
Acute hemorrhagic pancreatitis.....	1
Ruptured aneurysm, iliac artery.....	1
Total	222

The hospital is the charitable institution of the city and receives a good share of these patients from the indigent classes for whom hospitalization was the last resort. Medical advice was seldom sought early in the disease unless pain drove them to the emergency clinic. A gauge of the seriousness of these cases will be found in Table II.

TABLE II. AVERAGE TIME ELAPSED BETWEEN
ONSET OF SYMPTOMS AND
HOSPITALIZATION

Acute appendicitis, simple.....	1.4 days
Acute appendicitis with perforations and peritonitis	3.3 days
Appendiceal abscess.....	6.0 days
Strangulated herniæ.....	20.1 hours
Acute perforated ulcers.....	6.0 hours
Intestinal obstructions.....	2.8 days
Gunshot, stab, and contusion injuries.....	2.0 hours
Approximately.	

The most serious group of the entire series were those suffering acute visceral trauma, of which 79 per cent were gunshot wounds; twenty-three of these cases suffered from two to five visceral perforations, thirteen cases suffered from five to ten perforations, six cases suffered more than ten perforations. Nine cases had no visceral injury.

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although the knife or bullet had pierced the abdominal wall. The relative frequency of the organs involved were as shown in Table III.

TABLE III

Perforations of colon.....	20 cases
Perforations of ileum-jejunum.....	20 cases
Combined involvement of colon-(jejunum)-(ileum)	11 cases
Stomach	9 cases
Spleen	2 cases
Liver	17 cases
Bladder	2 cases
Severe hemorrhage (abdominal).....	8 cases
Hemothorax	12 cases

Complications were frequently seen, consisting of pulmonary infection, shock, hemorrhage and cardio-renal disease, and when operation was advisable the selection of the proper anesthetic was of evident importance. At the beginning of the year (July, 1929-1930) spinal anesthesia was used routinely in those cases with pulmonary or urinary complications, but gradually its use was extended to most cases requiring emergency surgery.

The anesthetic agent used in practically every case was procaine crystals dissolved in the patient's spinal fluid. The youngest patient was six years, the oldest seventy-three years of age.

The instrumentarium consisted of a syringe with fine gauge needle about 1.5 inches in length for local anesthetization; a so-called Pitkin spinal needle; a 10 c.c. Luer syringe; procaine crystals and procaine solution.

The dorso-lateral position was used in each case, and the site of injection was selected in the lumbar region at the interspace of greatest prominence up to, and including, the second lumbar interspace. The skin and paravertebral tissues and the dura mater were slowly anesthetized, after which painless lumbar puncture was done and the

needle manipulated until a steady flow of fluid was obtained. The 10 c.c. Luer syringe had previously been "loaded" with the dry procaine crystals; it was taken up and attached to the dripping spinal needle from where the required amount of fluid was slowly withdrawn; it was then disconnected, gently agitated to dissolve the crystals, and the resulting solution injected. Barbotage was not necessary.

Our method of reaching the desired level of anesthesia was obtained by varying the rate, the amount and the concentration of the injected drug. Our experience leads us to employ the schedule in Table IV for more consistent results.

TABLE IV

Level desired	Procaine crystals	Amt. spinal fluid	Rate of injection (Approx.)
Perineum and lower extremities	75-100 mg.	2-3 c.c.	Slowly without force
Umbilicus	100-150 mg.	4-5 c.c.	1 c.c. per second
Complete abdomen	200-300 mg.	7-8 c.c.	1½ c.c. per second

The upper limits of amounts of both fluid and crystals were used in the tall asthenic type of individual, the lesser amounts in the hypersthenic individual. This method, although empirical, was more satisfactory than the milligram-per-pound method.

We stressed adequate preoperative preparation in each case and attempted to revive the patient to as near his normal state as possible. Enough time was allowed for the administration of this preparation and for the expected result to appear. In our most serious cases this period occasionally exceeded one hour although one case required twenty-four hours.

Morphine and hyoscine were given to practically every case in physiologic doses except to the young and very old, preferably one hour before operation.

The vasomotor stimulants, ephedrine and epinephrine, were not given routinely but only as an unstable vasomotor system required support and then in sufficient amounts to produce the desired result. We did not use either ephedrine or epinephrine

when gross uncontrolled hemorrhage was present, believing that all stimulants increased the hemorrhage. When the bleeding vessel was ligated treatment was carried on as in any other case without this complication. These stimulants, when indicated, were given about one-half hour before, and repeated at, the administration of the anesthetic. We found that cases of advanced intestinal obstruction, B. Welchii infection and extensive visceral trauma all required this type of treatment routinely. Not infrequently one of our patients did not respond to even repeated doses of ephedrine, but epinephrine always produced a response. Toward the end of this series epinephrine was more frequently used than ephedrine. The Trendelenburg position was used in almost every case in some degree.

All hydrotherapy was given intravenously. Normal saline solution with 5 per cent glucose was used most frequently in amounts varying from 1,000 c.c. to 2,000 c.c. or more; all cases of visceral trauma, perforated ulcers, crushing injuries and extreme cases were given this treatment routinely. The cases of intestinal obstruction showing dehydration, vomiting or other toxic signs were given a 5 per cent or 10 per cent sodium chloride and a 5 per cent glucose solution.

Cases with severe hemorrhage or shock that did not respond to the saline and glucose were given transfusions of whole blood in sufficient quantities to bring back color and a steady, full pulse; operation followed soon afterward. We employed the modified Unger apparatus, as devised by Brines, which allowed us to give whole unmodified blood directly in amounts ranging from 500 c.c. to 1,500 c.c. in a five or ten minute period.

A short stop at the fluoroscopic room on the operating floor with gunshot cases, when the course of the bullet was unknown, greatly aided in shortening our operative time.

Observations regarding: (I) the success of anesthetic, (II) the behavior of the gut during the operation, (III) blood pressures, (IV) the convalescent period and (V) deaths during anesthesia will be discussed in order.

I. SUCCESS OF ANESTHETIC

In the entire series there were four failures in obtaining a satisfactory anesthesia at

the first attempt, but a second administration produced the desired result. In five cases no spinal fluid was obtained at puncture but good anesthesia resulted when the procaine crystals were dissolved in sterile normal saline solution and injected as described in the above routine.

From the angle of surgical approach, the advantages of "the quiet abdomen" were especially noticeable during the operation upon the emergency case. Exposure, manipulation, evisceration, spreading of gross contamination, the operative time and use of sponges and retractors were reduced to a minimum; these were tangible and important factors influencing the patients' progress.

II. BEHAVIOR OF THE GUT

It was observed that under two conditions the gut became immobile either locally or generally, depending upon the extent of the injury. A localized peritonitis, such as that found near a recently ruptured appendix or an acute injury, due to gunshot, or ulcer, caused a local paralysis of the bowel. Peristalsis began a short distance away from the injured segment and gradually became more intense until the hypermobile type was present again. When the inflammation was generalized or the injuries involved the entire bowel tract, no peristalsis was observed. Suturing of a bowel perforation caused local spasm but peristalsis did not return during operation. Soiling, due to peristalsis, was not observed in any case even when complete transection had taken place. The bowel forming the wall of the appendiceal abscesses did not show peristaltic movements.

We believe that the trauma or inflammation paralyzed the intrinsic mechanism and prevented the nervous impulse from reaching the muscular coat. It is on the basis of these observations that we do not believe that spinal anesthesia is contra-indicated when acute intestinal trauma or inflammation are present.

III. BLOOD PRESSURES

In no single case of the entire series were we able to predict the behavior of the blood pressure or the reaction of the patient from the initial blood pressure taken before operation. In an analysis of the blood pressure records of groups of cases (appendiceal group, ulcer group, etc.) we were able to obtain material for consideration.

APPENDICITIS

Preoperative vasomotor stimulants were not used in the appendicitis cases and only twenty received them during operation in the beginning of the series. The drop in systolic pressure occurred during the first 15 or 30 minutes and then returned to normal; no systolic pressure lower than 64 mm. Hg. was recorded, the majority dropping to 90-100 mm. Hg. before returning to normal. The pulse pressures remained within normal limits. It was observed that the greatest fluctuation of blood pressure occurred in those cases having the greatest absorption of toxic products.

In the cases of simple acute appendicitis, the average blood pressure and pulse rate was 119/77 mm. Hg. and 90 per minute; the average drop in systolic pressure was 17.2 mm. Hg.

In the cases of appendiceal abscess the average blood pressure and pulse rate before anesthesia was 121/78 mm. Hg. and 101 per minute; the average drop in systolic pressure was 16 mm. Hg.

In cases of acute appendicitis with perforation and local peritonitis the average blood pressure and pulse rate before anesthesia was 125/76 mm. Hg. and 112 per minute; the average drop in systolic pressure was 25 mm. Hg.

PERFORATED ULCERS

Preoperative stimulants were not given to the cases of acutely perforated duodenal or gastric ulcer; nine cases received them during the operation. The average blood pressure and pulse rate taken before anesthesia was 132/84 mm. Hg. and 98 per minute. The average initial drop in systolic pressures was 26 mm. Hg. Full recovery took slightly longer than 30 minutes but less than 45 minutes. The lowest systolic pressure recorded during operation was 68 mm. Hg. The pulse pressure remained within normal limits for practically all cases.

INTESTINAL OBSTRUCTION

The average blood pressure and pulse rate taken just before administration of the anesthetic in all cases of acute intestinal obstruction was 139/93 mm. Hg. and 101 per minute, the highest was 186 mm., the lowest 110 mm. Hg. We found that the reaction of the blood pressure after administration of the anesthetic formed a basis of dividing these cases into three definite groups

that corresponded to the clinical findings. These groups we designated as follows: (a) the early non-toxic group; (b) the early toxic group, as represented by the majority of strangulated herniæ; and (c) the advanced toxic group. Blood pressure fluctuations in the first (a) group compared favorably with those in the appendiceal series. In the second group (b), the average drop in the systolic pressure following anesthesia was 38 mm. Hg., which did not recover until after a 45 minute period; no reading was lower than 52 mm. Hg. systolic, the majority dropping to 90 mm. Hg. The average drop in pulse pressure was 8 mm. Hg. for this group. In the third group (c), the average initial drop in systolic pressure following anesthesia was 40 mm. Hg., the greatest of any of the series. The readings were very erratic, abrupt falls in pressure with slow recovery were the rule. No case showed recovery at the end of a 30 minute period even when large doses of stimulants were given. In every case of this group the pulse pressure was below normal from 10 to 18 mm. Hg. Further immediate observation was stopped by returning the patient to the ward. Loss of vasomotor stability was apparently in direct proportion to the degree of toxicity resulting from the obstruction. One of the deaths during anesthesia occurred in this latter group.

VISCERAL TRAUMA

The material obtained from the cases of acute visceral trauma was difficult to correlate because of the varying degrees of trauma encountered. Practically every case was given preoperative stimulants, with the exception of the acute uncontrollable hemorrhage cases. One-half of the cases were given stimulants during operation, the average number of doses being four (ephedrine gr. $\frac{3}{4}$ or epinephrine m X V). The average blood pressure and pulse rate taken before operation was 133/83 mm. Hg. and 97 per minute. In one case no blood pressure was obtained and in another the systolic pressure was recorded as 30 mm. Hg., while the diastolic was not obtainable; both cases were in good general condition and were operated because of the urgency of the pathology; both were successfully treated. The average initial drop in the systolic pressure of the more serious cases (two-thirds of the group) was 34 mm. Hg. and recovery did not take place in a 30 minute period.

The average drop in pulse pressure was 12 mm. Hg. Clinical study of the cases suffering moderate shock before the preoperative treatment did not suggest that the anesthetic increased the seriousness of the patients' general condition; this was not true, however, of the advanced cases. Three cases died in this group during anesthesia; all had large intra-abdominal hemorrhages.

In three cases of traumatic amputation of the lower extremities with severe shock and three cases of extensive B. Welchii infection requiring amputation, spinal anesthesia involving these members only did not apparently affect the blood pressure or the clinical progress of the case.

Comment: It was noted that the blood pressure of the abdominal cases apparently followed that observed when spinal anesthesia was given to a chronic case except when severe recent hemorrhage, severe toxicity or severe shock were complications. Either one or any combination of these complications that might have been present before the preoperative treatment had brought back the blood pressure and general condition within range of normal, caused a delayed recovery of the initial drop in systolic pressure and the pulse pressure in proportion to the severity of these complications. When these complications had been marked, death occurred during anesthesia in five of our cases.

These data strongly suggest that the seat of the trouble was in the vasomotor system, which had been rendered both unstable and inelastic by the complications mentioned. When these complications were of the advanced type, the burden of a spinal anesthetic placed the patient in definite additional danger.

IV. CONVALESCENCE

The contrast between cases involved by similar surgical conditions and operated upon under spinal and ether anesthetics was as marked in the immediate convalescent period as during the operation. Conservation of the patient's vitality appeared to be the outstanding clinical observation in the majority of cases undergoing a spinal anesthesia.

Post-operative complications usually accredited to the anesthetic were found as indicated in Table V.

Bronchitis appeared most frequently between the second and the fifth days and in-

volved 13 per cent of the cases. The case of severe headache was of three days duration and was controlled by magnesium sulphate enemas. The case of meningismus began to have nervous symptoms the third day; at a diagnostic spinal puncture, blood-tinged spinal fluid was drained and the symptoms cleared up entirely in three days. We believe that the bleeding may have been caused by venous puncture at the time of administration of the anesthetic.

TABLE V. POST-OPERATIVE COMPLICATIONS
(222 CASES)

Type of Case	Bronchitis	Urinary Retention (Medical)	Urinary Retention (Catheter)	Delirium Tremens	Atelectasis	Headache	Meningismus	Uremia	Cardiac Decompensation
Gunshot and stab	8	2		1					
Appendicitis	15	16	1		1	1	1		
Intestinal Obst.				1					
Strang. Herniæ	4	1	1	1				1	1
Ulcer	2								
Total	29	19	2	3	1	1	1	1	1

The majority of these patients were obliged to take care of themselves following their discharge from the hospital and for that reason the convalescent period was somewhat prolonged. The average stay for simple acute appendicitis was 10.5 days; without complications (wound infections, etc.) 8.8 days. Appendiceal abscess, 28.2 days. Appendicitis with local peritonitis, 21 days. Intestinal obstructions, 13.6 days. Perforated gastric or duodenal ulcers remained 10 to 14 days. Strangulated herniæ averaged 13.4 days. Gunshot and stab wound cases averaged 17 days, but three cases in this group lengthened the average stay from 12.8 to 17 days.

V. MORTALITY DURING ANESTHESIA

Five deaths occurred during anesthesia. All of these cases were extreme risks, the operation being justified because the patients' only possible chance of life depended upon this form of treatment. Three were cases of uncontrollable intra-abdominal hemorrhage, one advanced intestinal obstruction and one terminal case of perforated duodenal ulcer, the diagnosis of which was obscure. The mortality in this series was distributed as shown in Table VI.

TABLE VI		
	Died during Anesthesia	Span of Anesthesia before Death Minutes
Perforated ulcer	1	10
Intestinal obst.....	1	27
Gunshot with severe hemorrhage	2	30, 25
Rupt. Iliac Aneurysm, severe hemorrhage	1	40

These are described:

Case G. No. 18832. White, male, aged thirty-nine years, was admitted to the psychiatric ward with provisional diagnosis of delirium tremens and an abdominal complaint. A satisfactory history was unobtainable from the patient, who had no available friends. Surgical consultation was called and a diagnosis was made of an acute surgical condition of the upper abdomen.

While administering the spinal anesthesia, beginning dependent cyanosis was observed. At operation, a perforated duodenal ulcer about 2 cm. in diameter and an advanced generalized plastic peritonitis were found. Ten minutes after administration of the anesthetic and five minutes after the onset of the operation the patient expired.

Case H. No. 8208. Black, male, aged thirty-nine years, was admitted with a history of having had an operation seven years previously for a "ruptured appendix"; for the last three years he had a number of short colicky attacks of pain which became progressively worse until five days previous to admission the present attack began. The pain was intermittent but continuous; he vomited just before admission but no fecal odor was noticed; he had had only one bowel movement in five days. Examination revealed a toxic patient, restricted abdominal movement, no visible peristalsis, slight rigidity and pain on deep palpation; pulse, rapid and thready; the blood pressure was 126/60 mm. Hg. At the operation the terminal ileum was obstructed in two areas; one area was involved in mat-like adhesions for a distance of three inches, in another area nearby a single band was found obstructing the bowel. Both obstructions were rapidly freed without attempting to peritonize. Breathing suddenly ceased; intravenous, intracardiac injections of adrenalin and cardiac massage through the diaphragm were of no avail. He expired approximately seventeen minutes after onset of operation and twenty-seven minutes after anesthesia began.

Case H. No. 2031. Colored, female, aged thirty-nine years, was admitted with multiple gunshot wounds of both lungs, left arm, and abdomen; routine treatment was given. At the operating room her blood pressure was 104/70 and pulse 70 per minute. A seven inch Moynihan's incision was made; the cœlom was actually filled with blood, three transecting wounds of jejunum, two perforations of transverse colon and a large macerating wound of right lobe of the liver extending downward to the celiac axis were found. Breathing stopped upon opening the peritoneum; all forms of resuscitation were unavailing.

Case G. No. 16873. Colored, male, aged twenty years, snffered multiple gunshot wounds of left shoulder, right buttock and abdomen. After routine treatment the blood pressure was 128/70 mm. Hg., pulse 88 per minute. Spinal anesthesia using

spinocaine. Abdomen approached by 6 inch Moynihan's incision; the cavity was filled with blood, the liver suffered a 2½ inch gouging laceration of the left lobe, 1 perforation of the anterior wall of stomach the size of a fifty cent piece, two transections of the jejunum and two perforations of the descending colon. At the middle of the operation he began to "go bad." He expired fifteen minutes after onset of operation and 25 minutes after the anesthesia began.

Case G. No. 19341. White, male, sixty years old, was admitted forty-eight hours after onset of severe piercing pain in umbilical region, followed by syncope and constant vomiting and progressive weakness. Examination revealed paleness of mucous membranes, pulse 60 per minute, temperature 98° F., slight abdominal rigidity and an indistinct tumor mass involving the right umbilical area. Diagnosis of intestinal obstruction was made. At the operation the tumor proved to be a retroperitoneal hematoma containing about 2 quarts of blood. At this point of exploration the patient died. Autopsy revealed multiple aneurysms of abdominal aorta and both common iliac arteries.

RECOGNIZABLE STAGES DURING EXITUS

During the exitus of these cases definite stages were usually distinguishable and appeared in the same order. The initial symptoms were reported by the anesthetist, blood pressure and pulse rate were absent from the arm and temporal artery; coincidentally the operative field became bloodless and the patient's color pale rather than cyanotic. Auscultation at the cardiac apex revealed a slow rate and faint sounds. Up to this point the condition could be described as a fainting spell. Shortly, the patient became restless, and some complained of a smothering sensation that pure oxygen did not relieve. Unconsciousness and gradual dilatation of the pupils followed. Administration of adrenalin, intravenously or intracardially, increased the heart rate and force sufficiently to record it at the wrist either at normal or somewhat higher. This effect was of short duration and subsequent administrations produced less and less of a reaction until no demonstrable benefit could be discovered. Continued artificial respiration with forced oxygen and carbon-dioxide administration did not appreciably influence the course of events.

When reviewing the cases it was apparent that in all probability the ultimate outcome would have been unchanged regardless of the type of anesthetic used, as several previous experiences with ether had borne out. All this strongly suggested that the margin of safety in emergency cases requiring abdominal exploration and complicated by severe uncontrolled hemorrhage, severe

shock or severe toxemia, could not be extended by spinal anesthesia.

SUMMARY

We have found in this series that spinal anesthesia was generally superior to other anesthetics of equal magnitude. We believe that it should be given wider consideration in emergency surgery below the diaphragm because operative shock, trauma and time were materially lessened and the immediate post-operative progress was more rapid.

Acute visceral perforation and intra-abdominal inflammation were not contra-indications to spinal anesthesia. The hypermobile gut became amobile when these conditions were present and the "quiet abdomen" allowed one to approach the lesion without spreading gross contamination.

Six of our cases suffered lesions of the lower extremities requiring operation in the presence of severe shock or toxicity, but with the anesthetic limited to the level of the symphysis pubis, no change in the general condition was noted.

Spinal anesthesia does not apparently increase the safety factor in advanced cases requiring abdominal surgery. As much consideration of the fitness of the anesthetic in any given case is as important with spinal anesthesia as with any other anesthesia.

Intensive preoperative treatment which produces a recovery of the patients' general condition to within normal limits (blood pressure, pulse, temperature, general reaction), may not offer enough reserve to an exceedingly unstable vasomotor system to withstand the added burden of a spinal anesthetic. Clinical consideration of the entire case history is of greater importance than the consideration of any one stage or finding.

We believe that there is a reasonable doubt that the deaths occurring during anesthesia in this series could have been prevented by the choice of another general anesthetic; it is most probable that a local anesthetic should have been employed. These cases unanimously point in the direction that the danger lies.

We believe that the deaths occurring during anesthesia were directly due to vasomotor collapse initiated by severe complications of the original lesion and completed by high anesthetization of the spinal nerves. The complications were severe shock, severe

toxicity and severe uncontrollable hemorrhage. Death was not immediate but repeated stimulations apparently fatigued the controlling mechanism before a lasting response could be obtained.

CONCLUSIONS

(1) Spinal anesthesia is highly satisfactory in emergency surgery and should be considered more frequently.

(2) Visceral perforations or intra-abdominal inflammations are not contra-indications to spinal anesthesia.

(3) Spinal anesthesia when confined to the level of symphysis pubis does not apparently influence the vasomotor system, surgically speaking.

(4) Severe shock, severe toxicity and severe uncontrollable hemorrhage are contra-indications to spinal anesthesia even if adequate treatment has brought the patient's condition within range of normal before operation.

(5) Deaths during anesthesia considered here are attributable to vasomotor collapse.

RURAL OBSTETRICS—ANALYSIS OF 500 CASES*

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This report presents a summary of five hundred consecutive full term deliveries or those advanced to the twenty-eighth week that they may be called premature labors as typical of what one experiences in a small town and rural practice of obstetrics. It omits that multitudinous group of early abortions, either self-induced, accidental or therapeutic and several tubal pregnancies. Of the five hundred women confined, only thirty-seven were hospitalized; of this latter group, twenty-seven were admitted for social reasons (the patient could afford hospital care and wished it), and ten, because of some present or impending toxemia, or complication to delivery. Eighty-one per cent of the patients had some degree of prenatal care, varying from one to sixteen office visits; the majority came from one to four times. In the 19 per cent without attention before delivery, it must be admitted that I did not observe any increase of maternal nor fetal pathology due to the lack of early professional care. The majority of this latter group were mothers who had borne a number of children in uneventful deliveries, and were careless about attention prior to confinement, or possibly it was a desire to save the added expense of care that led to this neglect.

If full coöperation of the expectant mother was obtained early in the pregnancy, a complete history and physical examination was taken on the first visit. If all indications were normal, a monthly urinalysis was made and the blood pressure taken. During the last two months, the urine was examined twice monthly. At the beginning

of the ninth month, the patient was again examined especially with reference to the position of the fetus. The appearance of any degree of toxemia or uterine hemorrhage during the gravid period often necessitated more frequent visits than just stated.

To aid in keeping the expectant mother's coöperation it has been my habit to have her read literature bearing on the subject of maternity. The Federal Government will for the asking, mail out two bulletins entitled "Infant Care" and "Prenatal Care." Our State Department of Health has a series of monthly letters which quite fully advise the patients both before and after delivery. These I frequently write for, asking that they be mailed directly to the patient. More often, however, I mail her a small booklet, "Instructions for Expectant Mothers and the Care of Infants," printed gratis by an infant-food manufacturing company, devoid of advertising, even omitting the company's name. The physician's name and address are printed on the cover.

After delivery, the patient is requested to come to the office in one month for a final pelvic examination, at which time she is told that she may return once a month if she wishes and have her baby weighed. This

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weight is recorded on individual weight charts also furnished gratis by the same infant-food manufacturing company.

I believe these little evidences of interest manifested towards the mother and her baby are worth while, and certainly entail no time nor cost.

Of the 500 women delivered, 355 were multiparæ and 145 primiparæ. Four hundred eighty were delivered normally. Operative delivery was resorted to with twenty patients, a frequency of 4 per cent. Six low forceps, five mid-forceps, one high forceps, seven podalic version and extractions and one cesarean section comprised the operative group. The indication for forceps was made very strict, possibly too much so. The low forceps operations were performed on five primiparæ and one multipara, for the following indications: (a) contracted pelvis with hydramnios, 1; (b) nephritis of pregnancy with prolonged labor, 1; (c) myocardial disease complicated by a nephritis of pregnancy, 2. One of these patients died with acute cardiac failure on the twenty-third day during the exertion of getting out of bed and walking to the toilet; (d) to terminate the effort of labor in a secundipara whose first delivery had been by cesarean section; (e) uterine inertia in a long labor, 1. There was one maternal, but no fetal deaths in this group.

Mid-forceps operation was performed on four primiparæ and one multipara with one maternal death and two stillbirths. One primipara with myocardial disease and broken compensation, was short, stocky, and adipose, with a small pelvic outlet. The labor was difficult; stillbirth with maternal death on the third day resulted. Three of the labors were prolonged because of large babies. One mother, a multipara of small stature, delivered a twelve and one-quarter pound stillborn baby. Another baby had about twenty-five clonic convulsions, the day after delivery, involving all of the extremities. A huge right dorso-temporal hematoma was liberated by incising the scalp, and the next day ten convulsions occurred; then gradually decreasing number with recovery. The child is still normal, seven years after birth. Mid-forceps operation was also used to terminate an eclamptic delivery. The mother and child survived.

High forceps was used once in a primipara, supposedly two weeks overdue. The patient was of small stature, but with nor-

mal pelvic dimensions. Several times she was apparently in labor, with "labor pains" ceasing on each occasion. Prolonged labor with intense uterine contraction, lack of engagement of the fetal head and maternal exhaustion indicated operative interference. The mother and child survived. The baby was nine pounds in weight and normal.

Podalic version and extraction were performed several times for the following indications: (a) eclampsia, 2; (b) transverse position, 3; (c) partial placenta prævia, 1; (d) prolapsed cord and right hand presenting, 1. In this series, there was one maternal death due to eclampsia, and four stillbirths, in three of which the fetus had been dead for one to four days. In the case of the patient with the prolapsed cord, the membranes had ruptured and the cord prolapsed two hours before I saw her.

Cesarean section was performed once for a central placenta prævia; the mother and child lived.

Cephalic presentation occurred 481 times; of which 271 were in L.O.A. position, 176 R. O. A., seven occiput posterior and twenty-seven were undetermined. There were in single pregnancies, twins excluded, fourteen breech presentations, of which twelve were frank and two were footling. There was also one hand and one face presentation. Three babies were in the transverse position. Of the twelve frank breech cases, one patient had a cephalic version during labor and was delivered normally from a left occipital anterior position. Of the remaining eleven, seven babies were delivered normally and lived, three were stillborn and one died in 48 hours with convulsions, probably due to a brain injury at birth. Concerning the three stillborn, two were in small primiparæ in whom a tight birth canal obstructed rapid delivery; the third was partially delivered with the head still in the vagina twenty minutes before my arrival.

There were only two foot-presentation deliveries; one was normal, with a live baby, while the other was stillborn, again due to a partial delivery of the fetus with the head held within the vagina before receiving aid. The one pregnancy with a hand presentation ended in a stillbirth, due to a prolapsed cord for two hours before the patient realized the possible seriousness of the complication and called for aid. The only face presentation was that of a congenital syphilitic monster. The birth was unusually easy

in spite of the presentation, as it was the fourth pregnancy of the mother. Preceding delivery, the membranes ruptured spontaneously 297 times and were artificially ruptured 203 times.

Perineal lacerations occurred in 125 patients, or twenty-five per cent of the deliveries. Forty-six of the tears occurred on the site of old scars, and 79 were primary. Practically all of the third degree tears were in primiparae, though several were in multiparae who had been previously lacerated.

During the accumulation of the first several hundred of this series, a review of tabulated data showed me that I was using pituitrin too freely, and that perineal lacerations occurred two and one-third times as often in patients who received pituitrin than in those who did not. In the last 300 deliveries its use has been much restricted.

Spontaneous delivery of the placenta occurred 489 times, manual delivery six times, and by the Crede method five times. Placental extrusion followed the method of Schultz 374 times, 75 per cent; of Duncan 112 times, 22 per cent; and undetermined fourteen times, 3 per cent. These figures followed closely the normal average which places the Schultz mechanism at 82.5 per cent.

Manual delivery of the placenta, performed six times, was necessary for the following conditions: adherent placenta, three; fragmentary delivery of placenta, two (one of these latter was extremely friable, the first portion coming away immediately following the second stage of labor); partial placenta prævia, 1.

Expulsion of the placenta by the Crede method, performed five times, was indicated

PERINEAL LACERATION

	Patients	No Laceration	Laceration	Degree of tear 1st	2nd	3rd	Per cent
Pituitrin used	173	120	53	21	28	4	31%
Pituitrin not used.....	327	255	72	23	43	6	22%
Total	500	375	125	44	71	10	25%

Episiotomy was resorted to approximately twenty-two times; practically all were unilateral. Placenta prævia occurred four times; three marginal and one central. In all but one of these pathological conditions, the pregnancies were delivered at term. Marginal: (a) primipara, flowed for three weeks moderately during the ninth month, and delivered normally at term; (b) multipara, seven para, was delivered by version and extraction at eight and one-half months. She had flowed moderately for three days, then had a profuse hemorrhage the day of delivery; (c) multipara, six para, delivered at full term, normally. She had one slight hemorrhage in seventh month. This occurred twice in the eighth month. At term she had a moderate hemorrhage the day before delivery, which became profuse the following morning; the cervix was then packed and the patient delivered normally in the afternoon. The central placenta prævia was in a multipara, six para. She was delivered at full term by cesarean section, immediately following a single profound hemorrhage. The mother and baby survived all four of these deliveries.

in: eclampsia, two; adherent placenta, two; and once for a partial placenta prævia which was bleeding.

Post-partum hemorrhage occurred thirty-one times, of which twenty-three were moderate, and eight severe. All responded to ergot, pituitrin, abdominal massage of the uterus, and, in one instance, suturing, except one of the severe hemorrhage group which required a uterine pack. The etiology of the eight severe hemorrhages were: atony of uterus, five. One of these was in a case of hydramnios, while in another the hemorrhage did not occur until three hours post-partum; partial placenta prævia, one; deep tear of the birth canal, one; and one in which I could not ascribe a definite cause. This patient, a tertipara, had always had profuse menses, and a severe post-delivery hemorrhage occurred with her first baby. Seven years ago she had a pelvic operation after a gonorrheal infection. She was confined to bed three or four weeks with a fever 99.5 to 101 degrees, and a mass in the left fornix. Gradual recovery followed. There were no deaths in this group.

There was a considerable group of toxemias encountered, including patients with

cardiac disease, aside from the toxemias of pregnancy.

Two patients had an active hyperthyroidism with an accelerated B.M.R. throughout their pregnancy. Both of these patients developed their toxic symptoms after the onset of pregnancy, having been normal previous to their gravid state. Lugol's solution was given at intervals as the condition warranted. They delivered normally and had a comfortable puerperium with gradual regression of the thyrotoxicosis.

Two patients developed influenza: (a) tertipara at eight months was ill one week preceding delivery. During the 24 hour period preceding labor she had repeated profuse rectal hemorrhages with a resulting hemoglobin of 25 per cent. During the puerperium, she had a lobar pneumonia, with ultimate recovery; (b) secundipara at seven and one-half months, had influenza for one week; the day before delivery a bilateral pneumonia developed. She delivered a stillborn fetus and died on the following day.

An active pulmonary tuberculosis, demonstrable, was noted in seven patients. There were no immediate maternal nor fetal deaths, though I believe one mother died about two years after her confinement. One of these mothers, I delivered normally as a primipara, after which she had a prolonged febrile convalescence. Contrary to advice as to future pregnancies, she was later confined twice at full term. As a secundipara, she had an adherent placenta which was removed manually in fragments. The puerperium was very severe and the patient had a high fever 100-105 degrees for ten days. The three children at present are of very frail constitution.

The history of another patient with pulmonary disease is of sufficient interest to note: her physical condition was apparently normal as a young woman. Her first pregnancy aborted accidentally at one and one-half months, after which she was curetted. Following this, she began to fail and a diagnosis of tuberculosis of the left upper lobe was made. Within a year after the abortion she again became pregnant and went to full term, with normal delivery of a ten pound baby. The baby died at four months with the following autopsy report:

"Sub-acute diphtheritic enteritis (Dysentery). Localized peritonitis. Sub-acute catarrhal gastritis. Sub-acute broncho-pneumonia. Atelectasis, chronic passive congestion and edema of lungs. Localized

pleuritis. Hydrothorax. Bilateral otitis media. Marked inanition. Marasmus. Congestion, edema, atrophy and parenchymatous degeneration of all organs. Excessive hemolysis. Pseudomelanosis of peritoneum. Rachitis. Meckel's diverticulum."

Five months after her confinement, she had an appendectomy, round ligament shortening and repair of a third degree perineal and cervical laceration. Two years later she was hospitalized with an acute pelvic inflammation and generalized arthritis. The following year she came to me with a well advanced pregnancy and an active lesion in the right lung. Following a normal delivery she was placed in a sanatorium for one year. Somewhat improved, she returned home, became pregnant, insisted on carrying the pregnancy and was again confined normally at term. At present, two and one-half years after her last labor, she is carrying on a losing fight against her pulmonary infection.

One patient became ill with measles the week preceding a full-term delivery, and the baby contracted the disease during the puerperium. The convalescence of both was uneventful.

Acute cholecystitis occurred in one patient two weeks prior to delivery. This added no undue complication, but retarded her convalescence as she flowed more than normal for a month.

One patient with secondary anemia whose hemoglobin varied from 30 to 40 per cent went to full term, treated symptomatically. An uneventful recovery followed, after delivery. A primipara with a hemoglobin of 65 per cent during the entire gravid period flowed freely after delivery with a resulting hemoglobin of 25 per cent. Full recovery followed.

Two primiparae with severe multiple arthritis were delivered at term normally. The more severe of the two was an invalid restricted to bed and chair, with partial ankylosis of all the large joints. The knees were completely ankylosed in 90 degrees flexion and the hip joints partially restricted in motion.

Eight cases of maternal gonorrhea and four of syphilis were under treatment at the time of delivery, or had been within a year previous to confinement. One of the syphilitic patients, a multipara totally blind, who gave a history of repeated miscarriages, delivered a monster at seven months. There were no cases of gonorrheal ophthalmia neonatorum. One patient, a multipara

with gonorrhea, died on the 15th postpartum day with a general peritonitis and pericarditis. Another patient, a primipara, was treated for an acute gonorrhea up to the time of delivery. During labor, no vaginal examinations were made. In this case, possibly fortunately, the membranes did not rupture until the head was born. On the fourth day of the puerperium, she developed a fever, lasting four days, temperature 99 to 102.2 degrees. The lochia was foul. There was moderate distress across the lower abdomen. The balance of the puerperium was normal except for a fever of 99 degrees for another four days at the end of her convalescence.

Cardiac disease comprised a large group which in several cases was complicated by pregnancy with fatal results. There were twenty-nine patients with mitral disease, either stenosis or insufficiency, and eight with myocarditis. On the whole, the patients with myocardial disease offered more of a problem in therapy during the gravid state, than did those with mitral disease, as the latter exhibited scant loss in compensation. The management of three of the myocardial group, all primiparæ, was very taxing. Two of these terminated fatally, as stated previously under the discussion of "forceps deliveries," after being in varying degrees of decompensation through most of the gravid period. The other patient, whose cardiac disease dated from two previous attacks of diphtheria, developed an hydramnios which was progressive with pressure on the diaphragm, with such dyspnea and embarrassment to respiration that she had to lie almost in a sitting position. This was accompanied by nephritis, and severe edema of the lower extremities. Her weight increased from 140 pounds pre-gravid to 254 pounds preceding delivery. With an impending failure of kidney function, labor was induced at eight and one-half months, and terminated successfully with a low forceps delivery.

Maternal anomalies were rare. One primipara had a tense vaginal septum in the mid-line, extending vertically the entire length of the vaginal vault, terminating in front of the cervix. The fetus was born prematurely at seven and one-half months, through the left portion of the vagina, without rupturing the septum; the baby lived.

Another primipara with arthritis deformans was described above. A secundipara,

though not strictly in the group of maternal anomalies, is worthy of mention. Her first pregnancy was normal throughout, but at term she was delivered of a seven pound normal baby by cesarean section. She came to me during her second pregnancy, and though she had normal pelvic measurements, the dictum "Once a cesarean, always a cesarean" confronted me. She was referred to Dr. Reuben Peterson, who advised giving her a test of labor. At term she was hospitalized and an uneventful labor terminated with low forceps. Another multipara, four para, had a most marked prolapse of the bladder and rectum, which were pushed down by the advancing fetal head.

Multiple infarction of the placenta was observed once, in a premature delivery with a living baby.

Pelvic deformities, as observed, constituted a small group. I have not at all made pelvic mensuration routine, but have limited it to a few primiparæ who were of small stature, a few who on examination appeared to have an abnormal pelvis and some who gave a history of previous difficult labor; 37 in all had pelvimetry. Possibly too much reliance has been placed on the statement of Williams, that "generally speaking, large well built women are likely to have normal, and undersized women contracted pelves." A small pelvic outlet was the most common deformity noted, though a contracted pelvis was seen once and the "relative assimilation" type of Epstein, with unusual prominence of the sacrum internally, was seen several times. A bony exostosis in the right posterior oblique prevented engagement in the one patient who had a high forceps delivery.

Appendectomy was performed five times during the gravid period with no maternal deaths: (a) primipara, appendectomy in second month, delivered prematurely at seven and one-half months; baby lived; (b) secundipara, appendectomy in the third month; full term normal delivery; baby lived; (c) tertipara, appendectomy at five and one-half months, baby born prematurely and died; (d) tertipara, appendectomy at the fourth month. In the eighth month of pregnancy the patient developed whooping cough. During the third week of this illness she delivered twins prematurely, and both babies died within forty-eight hours; (e) multipara, appendectomy in the fourth

month. Normal full term delivery; baby lived.

Toxemia of pregnancy with its variety of symptoms and degrees of severity offered the really big problem in the management of nineteen pregnancies. Ten were of the nephritic type, with albumin, casts, hypertension and edema; six of these were carried as close to term as possible, and then labor was induced prematurely to prevent any catastrophe. The most profound case of toxemia of the nephritic group was in a patient delivered in consultation, a secundipara with normal delivery at term. For five weeks preceding labor she had an extensive edema of her legs and abdomen. When she was seen at the time of delivery, the edema was most profound. The urinary albumin was almost solid on testing. She had an albuminuric retinitis, with blindness for one and one-half weeks. There was a coarse mitral systolic murmur heard distinctly in the axillary area, and the left cardiac border was well out. The blood pressure was 164/130. The puerperium was uneventful, with return of the patient to normal. There were no deaths in this nephritic group.

Three cases of eclampsia were encountered: (a) primipara with a normal gravid period; the last urinalysis, one week preceding delivery, was normal. She had five convulsions during the hour preceding a mid-forceps delivery. Normal puerperium. Mother and baby lived; (b) multipara first seen in labor with repeated convulsions. Following a version and extraction, the convulsions ceased. The puerperium was normal; mother and baby lived; (c) primipara of very small stature; weight 88 pounds. Pelvic measurements were just within normal proportions, though she had a rather acute pubic arch. She was extremely well throughout her pregnancy, with normal urine and blood pressure. However, she had a tachycardia, most of the time, the cause of which I could not determine. During the week preceding her date of confinement she had a diarrhea for two days from a dietary indiscretion. Following this, on office consultation, she was in good condition, urine and blood pressure normal and the fetus viable. Three days later on being called to her home, all the symptoms of a pre-eclamptic were in evidence: blood pressure 184/110. There was a heavy trace of urinary albumin. The fetus was apparently dead. The

patient had an acute edema of feet and ankles for the previous eighteen hours and an intense headache for twelve hours. She was hospitalized and every attempt made to induce labor, but unsuccessful. Three convulsions were promptly controlled by 20 c.c. of 10 per cent magnesium sulphate intravenously, on each occurrence. A difficult version and extraction, and cranioclasia delivered the dead fetus. Maternal death occurred five minutes later.

Two patients were rather toxic at the time of premature twin stillbirths; in both cases the twins had probably been dead about one week. Convalescence of each was normal.

There were six patients with hydramnios, two of whom were included in the nephritic group mentioned above. Hydramnios caused several of the patients moderate respiratory embarrassment and edema of the legs. In one instance a premature stillbirth occurred, and in two, the babies were greatly under the average normal weight.

PUERPERIUM

In the 500 deliveries, there were 473 with a normal and uneventful convalescence and twenty-seven in whom it was abnormal or prolonged. These figures are only approximate, and the exact maternal morbidity undoubtedly underestimated. With the huge majority delivered outside of a hospital, and usually only one post-partum visit made, it is reasonable to assume that some mothers had a post-delivery fever which escaped notice.

Of the twenty-seven patients, nineteen have been included in the toxic or hemorrhagic groups above. Eight had a normal gravid period but an abnormal puerperium as follows: one breast abscess and salpingitis (this patient had a breast abscess with her first baby); one breast abscess and hemorrhoids requiring surgical care; one acute mastitis, one secondary anemia; one prolonged urinary retention; one lobar pneumonia; and two with fever of undetermined origin.

MATERNAL MORTALITY

There were five maternal deaths in this group; two multiparæ and three primiparæ. The multiparous causes were: (a) influenza-pneumonia; (b) peritonitis and pericarditis in a patient with gonorrhea. The

primiparae died with the following: (a) eclampsia, one; (b) heart disease, two.

INFANT STATISTICS

The fetal aspect of this report is of interest. There were 515 babies born, including fifteen pairs of twins. The male babies averaged 7.45 pounds, and the females 7.1 pounds. Two pairs of twins were stillborn and two pairs, born prematurely, died. Only two mothers in the group had delivered twins previously.

An account of one twin delivery, exemplifies the trouble one may unexpectedly encounter when working alone, without proper aid: patient, six para; first twin, in L.O.A. position, was born spontaneously. Just at delivery an abnormally short cord broke at the umbilicus, and retracted. While attempting to clamp the fetal end and search for the bleeding maternal end, the left foot of the second twin presented and its cord prolapsed. Intra-uterine death occurred before the fetus could be delivered; this twin was otherwise normal. The first twin had a huge symmetrical goiter, with extreme cyanosis of the face; the scrotum was well developed but the penis was absent, and the right testicle undescended; there was no rectal orifice. Death ensued in 48 hours. The single placenta weighed 3.5 pounds. In connection with the congenital goiter, it is of interest to note that both parents had large adenomatous goiters; especially the mother whose goiter was quite deforming because of its size. The fourth baby born to this mother had a bilaterally symmetrical, hypertrophied thyroid, the lobes being

the size of the baby's fist. There was cyanosis of the face and head in this case also. The cyanosis cleared in two weeks and the thyroid had resumed normal size in seven weeks.

Fetal abnormalities occurred eighty-three times. This classification is rather broad as it includes premature and stillbirths as well as congenital defects and monsters. Many times several conditions existed simultaneously in the same baby. They are as follows: thirty-two premature births, of whom thirteen lived and nineteen died within forty-eight hours; twenty-three stillbirths; four monsters; two club foot; five spina bifida and hydrocephalus; five cephalhematomas; six congenital goiters; and one each of the following: absence of first carpal joint of fifth left finger; penis absent; imperforate anus; penis adherent to scrotum; profuse gastric hemorrhage on the fifth day, baby survived; slight facial paralysis after instrumental delivery, with gradual recovery to normal.

Several times the cord was of sufficient interest to make a note of it; on one occasion the cord thrice around the neck occurred in a stillborn baby. Twice a loosely tied single knot was observed.

What a report on the management of 500 labors proves, is questionable. It does demonstrate the fact that one may keep accurate records and be guided by a perusal of them as to good or bad results in certain lines of activity or therapy, even though he is far from a medical center or well-staffed hospital. My early experience with pituitrin and recorded results showed me the value of well-kept records.

INCIDENCE OF SYPHILIS IN PRIVATE PRACTICE

Edgar F. Kiser and C. B. Bohner, Indianapolis, analyze their observations in 2,872 consecutive examinations made from Sept. 1, 1925, to Jan. 1, 1932, on private patients who came to their offices for physical examinations. They were of the well-to-do and middle class in about equal proportions. All were white. There were 1,084 men and 1,788 women. The individual occupations are not recorded, but a cross-section of the group would represent in occupation, wealth and social position an average practice recruited from the so-called upper social strata. None came primarily because of known syphilis; in fact, none had primary lesions at the time of our examination and only two had secondary manifestations.

Blood Wassermann and Kahn tests were made as a routine on each patient in the series. The work was done in a commercial laboratory, all tests were made by a single technician, a man regarded by the physicians of the community as being entirely dependable. In every instance the complement fixation was done by the Kolmer method, as well as with cholesterolized and alcoholic antigens. No reaction was reported as four plus unless the blood reacted so with all three antigens and showed a four plus Kahn reaction as well. Of the 2,872 patients 105, or 3.65 per cent, responded with such a straight four plus reaction. Sixty-six of the 105 patients were males—an incidence of 6.08 per cent of the 1,084 men in the series; 39 were females—an incidence of 2.18 per cent of the 1,788 women examined.—*Journal A. M. A.*

KIDNEY INFECTIONS OF THE ADOLESCENT FEMALE

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Female adolescence is the period extending from the time when changes of puberty begin to manifest themselves to the time when the function of menstruation has been regularly established, the secondary sex characteristics fully developed, and the girl has practically reached her full physical stature, although the bony pelvis does not attain full size until the twenty-second or twenty-third year, the age of nubility. Early adolescence is a critical period in which unhygienic methods of living may easily produce disastrous results affecting both body and mind. There is marked alteration in the entire body biochemistry, especially in the blood and lymph balance. This marked change is mostly centered in the female pelvis at an important point of elimination by the kidneys.

Bacterial renal infections termed "pyelitis" occurring in boys at this age is, in my experience, practically unheard of, whereas in girls it is extremely common, with recurrent fever, chills, backache, and urinary symptoms often of unexplained cause. The pyelitis of infancy is estimated to occur in girls in a ratio of about ten to one; the pyelitis of adolescence is confined exclusively to girls on account of the definite pelvic changes which are seen if they come to general examination and cystoscopy.

The condition is much more common than is generally recognized, for several reasons, one no inconsiderable one being the reticence on the part of the pubescent girl to complain of burning or frequency of urination. School children may be quite stoical in enduring dysuria above all other less intimate symptoms rather than voice complaint.

Infections of the kidney in pre-adolescents are probably due directly to the specific changes noted in the bladder and pelvic ureter at this period. While the determination of previously existing renal infection is difficult because of the frequently indifferent history and treatment of previous pyelitis of infancy, as well as a recurring cystitis from chronic urethral gland infections, in early puberty a flare-up of latent conditions in the renal pelvis is decidedly frequent.

The clinical entity of pyelitis of adolescence shows a routine clinical picture. Similar to the true pyelitis of pregnancy and the exacerbation of renal infections pre-existing

to the pregnant state which is a specific condition most frequent in multiparae, most often on the right side, worst at the twentieth week and tending to resolve thereafter—so the clinical entity of pyelitis in pre-adolescents shows a routine clinical picture and regular organic findings. The etiology is bacterial invasion plus defective drainage from the ureters, and distant as well as proximal foci of infection such as may be ascribed to the direct lymphatic communication between the colon and the right kidney, and it is due to the organic pelvic changes occurring at this age. Spontaneous pyelitis with no stone, hydronephrosis with no stasis, in contradistinction to the secondary infections with these conditions predisposing, occur in female infants frequently. In adolescent girls, just as in pregnant women, there are definite predisposing influences which can be visualized on examination.

The changes which I have noted through the cystoscope uniformly in early adolescence (in the quiescent periods and not with acute inflammation present) are: elevation and congestion of the trigonal mucosa; trabeculation of the floor of the bladder; elevation of the inter-ureteric ridge with more prominently appearing ureteral orifices; suggestion of dilatation of both ureters on passage of ureteral catheters; and diminished peristalsis and emptying seen on ureterographic pictures. This is probably due to extra-ureteral vascular engorgement. The constant finding of pyuria yielding colon bacilli, because of its overgrowth of other organisms, and the usual presence in the stained sediment has been regularly found in my cases. The pyelitis is always bilateral due to the hyperplastic changes in both ureters without the twisting dextra-rotary factor occurring in the bladder in pregnancy.

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The endocrinal changes responsible for the uretero-vesical alterations during early pubescence should have relevance to the ovarian metaplasia causing the vascular engorgement in the uterine and ovarian arteries, their branches to the lower end of the ureters, profound lymphatic alteration in the pelvic channels and glands. Pituitary change and its recently proven specific activating influence on the ovaries, but more especially its specific effect on the ureteral musculature and its peristalsis is a factor.

The occluding kinking power of structures crossing over the lower end of the ureter is increased manifold at the pre-adolescent stage. Extension of adnexal disease, which may perhaps include colonic stasis, with bacillus coli migration with or without thrombophlebitis, may be an infective factor. Infection through the lymphatics of the ureter, which continue from the bladder up to the renal pelvis, is a possible source for the ascension of bacteria as well as lymphatic involvement from the rectal glands and stagnation and absorption from the bowel.

The commonest source of infection is probably direct ascension along the lumen of the ureters from the infected bladder which may have been directly contaminated from the female urethra. The occurrence of pyelitis in infancy, being a disease of females, gives support to the probability of the infection coming in from the female urethra and chronic infection in the urethral glands. Vesico-renal reflux should only occur with either vesical neck obstruction or with considerable stagnation in the bladder. It has been claimed that *Bacillus coli* findings are positive in a great many normal bladders and in pregnancy with its residual urine in 60 to 80 per cent of all cases.

The usual symptoms are pallor, restlessness, pyuria, dysuria, incontinence, malaise, and chills with fever. Fever of undetermined origin should be the chief symptom making imperative an examination of the urine for pus. Any one of these symptoms alone requires consideration of kidney infection.

Diet and hygiene are essentials in the treatment, which comprises a very careful hygiene for the adolescent girl. Although there is no theoretical reason for the limitation of proteins, renal infections seem to do better with fruit and vegetable diets. Rest

and moderation of exertion in play, which girls at this age are apt to overdo, as well as insistence on regular emptying of the bladder when at school, must be emphasized.

In the removal of foci of infection such as may be present in the tonsils, middle ear, etc., chronic infection causing leukorrhea in little girls is common and requires investigation. The incidence of vaginal gonorrhea in young girls is so much greater than is generally recognized that it is more than a matter of conjecture how many of the so-called simple leukorrheas in virgins may be due to a secondary infection after a gonorrheal vaginitis of childhood. This can be cleared up by careful persistent vaginal instillations of various antiseptics, by the mother, daily for several months.

Prevention of colonic stasis as possible source of the colon bacilli is achieved by the diet, free water intake, and general measures to overcome colonic stagnation.

Medicinally the use of methenamine with acidification of the urine with ammonium chloride or sodium acid phosphate is of benefit, changing to alkalinization with sodium citrates and bicarbonates. None of the newer expensive antiseptics is any better or as good as methenamine. Intravenous methenamine puts a greater concentration of formaldehyde in the bladder than that taken by mouth.

Pituitrin injections hypodermically seem to have a beneficial effect on the musculature of the ureters as well as a definite effect in the relief of pain. It has perhaps an endocrinal effect on pelvic organs, resulting in improvement. Hospitalized cases where this has been used apparently responded well in several cases.

Drainage is a requisite for recovery. Bladder drainage is kept up best by not allowing overdistention, and by instillations of argyrol or other mild solutions per catheter after emptying the bladder. Ureteral drainage by the Fowler position is maintained in the acute cases, and determining the patency of the ureter with drainage by the ureteral catheter is indicated in the recurrent cases. Drainage of the renal pelvis must be accomplished in recurring cases by cystoscopy and catheterization of the ureters, or if the acute case is of over two or three weeks' duration. Lavage of the renal pelvis is not as important as is the ureteral dilatation and drainage.

SUMMARY

1. Pyelitis in early adolescence in females is a definite clinical entity very similar to pyelitis in pregnancy.

2. Because of lack of its diagnosis, no statistics are available as to the frequency of occurrence of pyelitis of the pre-adolescent. All other types of renal disease with organic change must be excluded.

3. Pyelitis of puberty occurs often with no discoverable focus of infection and must be attributed to ascending infection as that occurring in the pyelitis of infancy, which is a disease of the female.

4. Treatment is effective and spontaneous subsidence occurs, but recurrences at regular periods are frequent, often concomitant with pre-menstrual congestion.

5. Typical pathological findings which are definitely constant have been described.

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ASPHYXIA NEONATORUM*

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The frequency of acute asphyxia in the newborn is the excuse for presenting a paper upon this subject. In the Second Woman's Clinic in Budapest a survey of 16,000 deliveries revealed that 800 babies were born asphyxiated; one-fourth of these did not respond to treatment. The subject falls naturally into the divisions of etiology, physiology, pathology, diagnosis, and treatment. In the interest of simplicity and also because it is foreign to our subject we will disregard those cases of asphyxia resulting from causes operating during pregnancy. Acute asphyxia of the newborn in the vast majority of cases is due to (1) brain injury, (2) interference with placental circulation, (3) mechanical obstruction to breathing, or (4) drugs.

Brain injury is the result of (a) crushing forceps injuries, (b) excessive pressure on the after-coming head in breech deliveries, or (c) prolonged perineal resistance in the second stage of labor.

The placental circulation is interfered with in (a) abruptio placentæ, either partial or complete, (b) placenta previa, (c) prolapse of the cord, both frank and occult. (d) excessive or tonic labor pains incident to the use of pituitrin or thymophysin, (e) rupture of the placental vessels in velamentous insertion of the cord, (f) coils of cord around the neck or extremities, (g) true knots and other less common conditions.

Mechanical obstruction to breathing re-

sults usually from the aspiration of meconium, plugs of mucus or liquor amnii. Congenital anomalies of the respiratory passages are so rare that we may disregard them in a practical discussion of the condition.

Finally we must consider the respiratory center which has been depressed by the administration of anesthesia or sedatives to the mother in an effort to lessen her suffering.

The conduct of the obstetrical case, especially in the hands of the specialist, has been changing from one of prolonged expectant inactivity to one of hasty and often inconsiderate interference. The merits, or demerits, of this change is beyond the scope of this paper. No one will deny, however, that the application of forceps, except in those cases where delivery is delayed, will occasionally cause enough cerebral compression to produce intracranial hemorrhage. In

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the hands of the expert these catastrophes are, no doubt, rare, but the surgical tendency which we have just mentioned has spread rapidly until now those who are less skilled are making free use of instruments.

The increasing demand on the part of women that childbirth be painless or nearly so has enormously increased the number of babies that are born heavily narcotized. The placenta readily passes on to the child any medicine administered to the mother. If the drug is given sufficiently early in the first stage, it is usually partly eliminated by the time delivery occurs and so is relatively harmless. But since we have difficulty in estimating the probable length of labor, it is not uncommon for the child to be born while the sedative is still at work. The importance of this factor cannot be over-emphasized.

Morphine has long been recognized as a respiratory depressant, and we try carefully to avoid its exhibition within two hours of the expected time of delivery. Scopolamine is linked with morphine in twilight sleep, and these two drugs have been widely condemned as the cause of an occasional fetal death where there was no other apparent cause. All of us are familiar with the limp, sluggish infant following even the careful use of these two drugs. Pernocton and sodium amytal have been more recently introduced into the treatment of the first stage and here, also, we have a marked depressant action.

There is another factor that is undoubtedly very important, and yet it receives but scant recognition, and that is the use of nitrous oxide anesthesia. Air contains 20 per cent of oxygen, but a patient cannot be anesthetized on less than 90 to 95 per cent of nitrous oxide, so there is a condition of anoxemia in the mother and likewise in the child. If this is continued over a period of time, it will unquestionably affect the fetal respiratory center. When using this type of anesthesia, the obstetrician should insist that his patient be kept pink and not slightly cyanosed, as is the habit with some anesthetists. Ethylene, because it is used with a higher oxygen concentration, is more satisfactory from this point of view, but its explosive character deters most of us from using it, especially where intermittent analgesia is required. In connection with this point let us bear in mind that ether and chloroform are used with an ample supply

of air and hence from the standpoint of fetal asphyxia are the anesthetics of choice.

Before dismissing the subject of etiology let us not forget that these factors often exist in combination with one another. We may have a prolonged hard labor treated liberally with sedatives followed by deep surgical anesthesia and operative delivery. In such a case to what shall we ascribe the asphyxia? No doubt, each factor is contributory and must be considered.

In speaking of diagnosis let us first say a few words about intra-uterine asphyxia. It is indicated by persistent slowing of the fetal heart below a hundred or an increase above 180. Do not forget, however, that if auscultation reveals fetal distress any operative interference, unless the head is on the perineum, will probably result in death of the child. Attempts to deliver a distressed child through an undilated cervix will hasten an inevitable fatality and possibly do irreparable injury to an otherwise healthy mother.

The passage of meconium-stained fluid is a time-honored signal of fetal embarrassment but should be checked by careful study of the heart tones. Careful consideration of the stage of labor and the condition of the mother will then determine the method of procedure.

The diagnosis of intra-uterine cord pressure and its treatment need not enter into our present discussion.

The recognition of asphyxia after delivery is evident from inspection of the child. The ordinary classification of livid and pallid asphyxia is convenient, although there are many gradations between these two extremes. While the condition is evident, the etiology often is not, and therefore the prognosis is clouded. If there are evident forceps injuries, or if a difficult version or breech extraction has been done, there is strong likelihood of brain injury, and our chances of resuscitating the child are poor. On the other hand, if twilight sleep or some of the newer sedatives have been used, we are probably dealing with a narcotized child, and the outlook is correspondingly good.

The prognosis, then, depends upon the condition of the child, a factor which we cannot always evaluate in the activity of the delivery room. Fortunately, the principles of treatment are the same and if we waste half an hour or more in working over a hopelessly injured infant, let us not forget

that lack of persistence might needlessly sacrifice another not so badly hurt.

The treatment of a condition which affects 5 per cent of the babies born is of vital importance to every one doing obstetrics. If one in twenty babies is so affected in a charity clinic, where narcotics and anesthesia are rare, and where operations are done only in case of real dystocia, it is safe to say that the percentage of asphyxiated infants among our pay cases is much higher.

In order to fully appreciate the problem before us let us briefly consider the physiology of respiration. In utero the partial pressures of carbon dioxide and oxygen are kept relatively constant by the passage of these gases through the placenta. The lungs are solid organs, and the pulmonary artery is short-circuited by the ductus arteriosus and the foramen ovale. With the first inspiratory movement of the child a negative intrathoracic pressure is created. This opens the alveoli of the lungs and creates a new field for blood distribution. The heart is pumping blood into the systemic circulation against a resistance of 120 to 140 millimeters of mercury, while the resistance in the pulmonary vessels is about one-tenth of that. The result is a rapidly increasing blood flow through the lungs and the establishment of the adult method of gas exchange.

An important point, and one not generally recognized, is the fact that the transition from fetal pneumatosis to complete expansion is a gradual one. This has long been recognized empirically, since a lusty, vigorous cry at birth is looked upon as a favorable sign. Autopsy records and X-rays of the newborn have shown us in recent years that atelectasis and consequent pneumonia are frequent factors in neonatal morbidity and mortality.

In considering the physiology of respiration it is necessary to bear in mind that oxygen itself is a food, not a stimulant. The stimulus to breathing depends upon the concentration of carbon dioxide. With increase of the carbon dioxide concentration in the blood, respiration becomes deeper and more rapid. This is the mechanism in the normal individual, whether adult or newborn. In the latter, however, we have another factor which cannot be overlooked. An infant recently subjected to severe cerebral compression combined with a variable degree of asphyxia must be looked upon as suffering

from an injury which may temporarily suspend the normal physiological stimulation of the respiratory center. For such a child a steady supply of oxygen is needed, not an increased concentration of carbon dioxide.

From the standpoint of pathology there is a vast difference between the apneic but uninjured child of a hard labor and an infant with severe cerebral hemorrhage. The immediate course of action is the same in both instances, however, and it is safe to defer a more accurate diagnosis until the immediate emergency is over.

Prevention, of course, is the keynote of all treatment, and the points to be considered here are many. First, we must shorten prolonged hard labors, especially if the protective sack of water has been broken. The judicious use of sedatives and the proper timing of interference is essential in these cases. To relieve perineal pressure on the head, wide episiotomy is frequently resorted to with gratifying results. Second, the avoidance of excessive dosage of drugs which depress the fetal respiratory center. Morphine, scopolamine, and other sedatives should be used guardedly and not at all for at least two hours before delivery. These drugs are invaluable in the first stage of labor but care must be exercised in both dosage and the time of administration. Nitrous oxide is an excellent anesthetic but it is better to saturate it liberally with ether and keep the oxygen content high enough to insure satisfactory aëration.

Deep anesthesia in difficult labor is often combined with operative interference and so several factors which produce asphyxia are combined. In these cases expert judgment and skillful application of obstetrical procedures is necessary if we expect to avoid serious fetal injury.

Despite our best efforts there will still be instances in which the infant is born in a condition of acute asphyxia, and it is the treatment of these cases which I wish to outline.

First, all such babies should be handled as if they were cases of cerebral hemorrhage. The mauling and abuse to which this class of patient has occasionally been subjected should be relegated to the museum of medical horrors. The Schultze swinging method, vigorous back slapping, hot and cold tubs, and crushing compression of the chest give unmistakable evidence of a total lack of ap-

preciation of the problem by the attendant. If the child is in good condition, it may suffer no ill effects. If it has a cerebral hemorrhage, such treatment will merely aggravate the condition. If the case is a borderline one, it will probably die as the result of manhandling.

There are three cardinal principles to be borne in mind. First, maintenance of body heat; second, clearing of the air passages; and finally, the administration of oxygen. To this might be added a fourth principle, namely, the prevention of the so-called secondary asphyxia. All of us are agreed on these points, the chief differences of opinion being in the methods of applying them.

There are several ways of keeping the child warm. The normal baby is wrapped in a blanket after the cord and eyes are cared for, and placed carefully in a crib warmed with a hot water bottle. But when the infant is asphyxiated the manipulations necessary to restore it are often carried on in the open air without even the protection of a blanket, so loss of body heat is inevitable. Care then should be exercised to keep the infant warm and expose it as little as possible to the chilling effect of room temperature. In this connection the warm bath is to be heartily recommended. This temporary disregard of aseptic technic in the care of the cord is almost invariably without ill effect.

The second principle is clearing of the air passages. As soon as the child is born it should be carefully held up by the feet while the chest and trachea are gently massaged toward the throat. This dislodges mucous and amniotic fluid, clearing the passage for the entrance of air. As a supplement to this the tracheal catheter is of great value. In the absence of one with a special bulb to catch the secretions, an ordinary rubber catheter may be used.

Finally, we come to the problem of administering oxygen, and here we find the greatest divergence of opinion. The physiologist analyzes the situation and decides that the unresponsive respiratory center must be stimulated and he concludes that the best stimulant is carbon dioxide, so he advises the administration of 95 per cent oxygen and 5 per cent carbon dioxide, a mixture which for simplicity is called carbogen. The obstetrician on the other hand sees an infant that has been badly used up by a tiring labor and he feels that the condition of depressed

respiration is due more to the trauma of delivery than to lack of carbon dioxide. In such delicate nervous tissue edema and stasis may be the entire pathological picture. Therefore, he concludes that if he can keep the center supplied with freshly oxygenated blood for a few minutes the child will recover, unless the damage is irreparable. The obstetrician, therefore, forgetting the fine points of physiology, administers oxygen.

Fortunately, the physiologist includes ample oxygen in his prescription and the obstetrician has no objection to 5 per cent carbon dioxide, so a compromise is easily effected. Without doubt, the problem at first is not one of a mixture of gases. The medulla is swamped with carbon dioxide and other waste products. The circulation is weak and sluggish. As soon as either air, oxygen, or carbogen enter the lungs the heart picks up rapidly, circulation is established, and the respiratory center begins to function. Simple inflation of the lungs is the best cardiac stimulant in the newborn. Adrenalin is valuable and may be given in ten to fifteen minim doses directly into the heart. Alpha-lobelín is an undoubted respiratory stimulant, but it is of little value when the circulation is embarrassed.

Having determined upon the nature of the gas mixture to be used in resuscitation, we are still at loggerheads over the method of inflating the lungs. Numerous suggestions have been made and much apparatus has been invented to accomplish this purpose. Simple reflex stimulation is of value in the mild forms of asphyxia. Rubbing the back, washing the child's face with cold water, tickling its feet, dilatation of the anal sphincter and sprinkling it with a few drops of ether are the mild and harmless methods in use. Excessive flagellation, the resounding whack that can be heard in the next room, and alternate hot and cold tubs, are the more vigorous forms of stimulation, which, while often effectual, may increase the injury to an already damaged medulla. In the same category is the obsolete Schultze swinging method. In addition to the danger due to rough handling we must consider the unnecessary loss of body heat which attends these methods.

We hear little of the lungmotor and pulmotor now, although they once enjoyed a vogue in the treatment of asphyxia. The Creiselman apparatus is an ingenious bit of

machinery designed to deliver the proper mixture of gases at the correct pressure, but it is costly and requires an expert to use it. We have in use at Harper Hospital a machine built by the McKesson Company, which consists of a mask and a water gauge attached to a tank of carbogen. By means of this the gas mixture can be delivered to the child in pressures up to eight inches of water. This amount of force is generally admitted to be safe.

The Drinker apparatus is much more complicated and is very expensive. The child is placed in the respirator with only its head exposed to the outside air. Passive artificial respiration is then produced by using negative pressure. In addition one can give carbogen through a mask. This is an excellent method, but its use is restricted to the large hospitals.

Of recent years the fire department has been introducing its treatment of asphyxia into the birthroom. No doubt, the rescue crews are gentle, well trained, and willing, but by the time they can reach the embarrassed infant valuable time will have been lost. Furthermore, if a competent physician is unable to resuscitate a child with his own equipment, the rescue squad will also fail.

The tracheal catheter may be used to deliver oxygen to the lungs. After the air passages have been cleared, it is introduced into the larynx and the expired air of the operator is gently blown into the free end. This is followed by careful compression of the chest and the maneuver is repeated eight to ten times a minute until respiration is established. But unless the tracheal catheter closely fits the opening in the glottis the air may leak back without entering the lungs.

This brings us to a consideration of mouth to mouth breathing. Like all other methods this one also has disadvantages, the first of which is infection. There is very slight chance of contaminating a child despite the fact that our mouths harbor pathogenic organisms at all times. The possibility of the operator contracting gonorrhea is also very remote even in the presence of an active infection. Syphilis, however, can enter at any point on the body, and it would be well to know first whether or not the patient has a positive Wassermann.

Then there is the danger of using too much pressure. It is generally stated that six to eight millimeters of mercury is the limit, but Caryllos and Birnbaum found that it

took fourteen centimeters of water to inflate an atelectatic lung in a dog. If we exceed this pressure, we may rupture the lung and cause death.

The advantages of mouth to mouth breathing will often outweigh the objections. First and most important, it requires no apparatus and is, therefore, always ready for use. We can satisfy the physiologist by using expired air with 4 per cent of carbon dioxide, although, for my own part, I believe this to be a matter of small importance. Since most of the babies are delivered in the home and since only a few hospitals have Drinker respirators or other mechanical means of resuscitation, the mouth to mouth method must be relied upon to revive the vast majority of asphyxiated children. For this reason I wish to describe it in detail.

First, the child is held up by the feet and the trachea milked to remove all mucus and amniotic fluid. It is then wrapped in a warm blanket and laid on a hot water bottle on a flat table. With either a tracheal catheter or an ordinary rubber tube of small caliber the larynx is cleared by suction. The hot water bottle under the body allows the head to fall backward, thus straightening the trachea. The nose is held by the thumb and forefinger of the left hand and the chest is held by the right. The mouth is then filled with expired air, the glottis is closed to prevent using too much, and with gentle pressure the air is forced into the child's lungs. The interposition of a piece of gauze between the mouth of the operator and the mouth of the infant is no protection against infection and merely interferes with the proper carrying out of the procedure. After the mouthful of air is delivered to the child the chest is compressed gently and then the maneuver is repeated about eight to twelve times a minute. Nothing is more dramatic than the way the heart picks up and the cyanosed child becomes pink. As a rule in a few minutes spontaneous respirations begin and soon it is breathing normally. Of course, the ultimate prognosis depends upon the extent of the infant's injuries. No method of treating asphyxia will have any influence upon cerebral hemorrhage.

I do not wish to be construed as deprecating the value of the carbon dioxide mixtures. Acute asphyxia is first and foremost a problem of tiding the child over a period of injury when its need is oxygen. Then, when respiration is established, the question

of gas mixture assumes great importance. Unless properly handled many resuscitated children will succumb to secondary asphyxia, which is an unscientific term covering several distinct pathological conditions. In the first place, a baby with a severe cerebral lesion may be revived only to die of its injury. Or the baby may develop adrenal hemorrhages and other intra-abdominal lesions which are not compatible with life. Others die of atelectasis and pneumonia, the result of faulty aëration of the lungs at birth. All those conditions have been grouped under the meaningless term of secondary asphyxia. It is in the cases of faulty aëration of the lungs that carbon dioxide has produced a revolutionary change in treatment. The mixture is probably of little use in initiating respiration, but it is invaluable for increasing the rate and amplitude of breathing.

This is easily understood when we recall the pulmonary expansion is gradual. The first breaths are very shallow, probably only from thirty to fifty cubic centimeters of air. When the baby cries loudly it closes the glottis and the pressure thus created increases the area of expansion and the child pinks up quickly due to the increase in the depth of inspiration. If the child does not cry and respirations remain shallow and weak, the oxygen-carbon dioxide mixture has a very pronounced stimulating effect. As a matter of fact, if this mixture is administered for more than fifteen minutes, there is danger of exhaustion. Therefore, we usually restrict its use to a quarter of an hour.

The relation of pneumonia to atelectasis is well known. If an area of the lung is not expanded, the pulmonary circulation is decreased and we get stasis and infection. The resulting pneumonia may be fatal. In all asphyxiated infants it is a good plan to systematically aërate their lungs several times a day by administering carbogen. If we check this treatment by X-ray studies, we will see extensive atelectatic areas clear up rapidly.

In conclusion, let us remember that the problem of acute asphyxia is one of a distressed child. The ultimate diagnosis is immaterial. Whether we have simple anoxemia or cerebral hemorrhage, the infant needs, first, warmth; second, removal of obstruction in the air passages; and finally, oxygen. Later, to prevent persistent atelectasis and pneumonia, carbon dioxide is indicated.

Acute asphyxia is an emergency that requires prompt and efficient treatment. The Drinker respirator and the various forms of apparatus designed to deliver oxygen and carbon dioxide at controlled pressures are good, but they are expensive and are often out of order. The tracheal catheter is cheap and easily available. Mouth to mouth breathing is probably more efficient than any other method but great care must be used to avoid excessive pressure. The danger of the operator infecting himself is slight but must be borne in mind. No special apparatus is required and it is recommended that all those practising obstetrics thoroughly familiarize themselves with its details.

DIETARY TREATMENT OF PSORIASIS

Jay F. Schamber, Philadelphia, calls attention to the statement of Schamberg, Kolmer, Ringer and Raiziss, made after a long and painstaking research nearly two decades ago, to the effect of the influence of diet on psoriasis. The very laborious, extensive and expensive studies in question resulted in the conclusion that there was a positive nitrogen metabolism in psoriasis. Accompanying this presentation of the subject was a series of "before" and "after" photographs, however, which constitute irrefutable documentary evidence of the truth of the statement that a "low protein diet" in the sense in which this term was employed has an enormous influence on the course of the psoriatic eruption. Within the period of eighteen years that has elapsed since the publication of the "Research Studies in Psoriasis," further evidence has come to the author of the verity of the foregoing statement. In only one case

of psoriasis has he not been able to effect a virtual disappearance of the psoriasis eruption by diet. He presents two tables in which are given diets of different type that he has employed in the treatment of patients with psoriasis. They contain from 4 to 5 Gm. of nitrogen and sufficient calories to cover the needs of a man doing a moderate amount of work. For hard-working persons, additional butter and cream can be added. One may allow plenty of sugar, and candy may be permitted between meals. These two diets give an idea of the way dietaries of this nature can be arranged, without losing sight of the necessity of a certain amount of variety in the menu. Oysters and ice cream may be added to the diet, as they contain very little nitrogen. To meet individual tastes, substitutions can be made. Berries, asparagus, broccoli, pears and like foods may be inserted in the dietary instead of cabbage and turnips and some of the fruits mentioned.—*Journal A. M. A.*

RELATIONSHIP OF LARYNGEAL PARALYSIS TO MEDICINE AND SURGERY

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Laryngeal paralysis is so often present in diseases of the neck and throat that the laryngologist can be of great aid to the internist and surgeon in the diagnosis, prognosis and treatment of these cases. The recurrent laryngeal nerve supplies all the muscles of the larynx except the cricothyroid; it may be called the motor nerve of the larynx. The recurrent laryngeal nerve is a branch of the vagus also deriving some of its fibers from the spinal accessory nerve at the nodosum ganglion; it therefore follows the course of the vagus through the carotid sheath and in so doing is exposed to the same surroundings on both sides of the neck. But after entering the thorax the recurrent laryngeal nerve follows a different course on both sides of the neck.

On the right side the recurrent laryngeal nerve leaves the vagus as the latter crosses the subclavian artery and, winding behind it, the nerve lies on the apex of the right lung and ascends obliquely between the trachea and esophagus to enter the larynx through the cricothyroid membrane. On the left side it is given off from the vagus as the latter crosses the arch of the aorta. Winding around the arch, it passes upwards to the neck, where it follows the same course as on the right side. But due to its larger course on the left side of the neck it is more exposed there; now following the recurrent laryngeal nerve in the opposite direction in the trunk of the vagus to a center in the medulla oblongata to the floor of the fourth ventricle. Here a lesion involving the center would affect only one cord, viz., on the same side as the lesion. Finally, the cortical centers on each side presiding over the motion of the cords have been found in the prefrontal gyrus of the dog by Krause; just posteriorly to the lower end of the precentral sulcus, at the base of the third frontal gyrus in the monkey; and Semon and Horsley found in carnivora that the center was in the precrucial and neighboring gyrus.

Due to the proximity of other cranial nerves in their origin and course through the skull and neck to the vagus, they are affected also, causing various syndromes.

We may have paralysis due to trouble in the recurrent, vagus or spinal accessory

nerves. If trouble is only in the recurrent, one may have paralysis only. If in the vagus, we will have these symptoms as well. If trouble is in the nodosum ganglion, we will have trouble in heart, supplied by the vagus.

If trouble is above the nodosum ganglion in the region of the branch from the spinal accessory going to the nodosum ganglion or in the spinothalamic tract, we get the syndrome of Avellis, causing vagus paralysis and loss of pain and temperature on opposite side of body, also eleventh nerve paralysis.

If a lesion affects the nucleus ambiguus (vagus and hypoglossus nucleus) together or in region of condylar foramen we have the syndrome of Jackson.

Affections of the nucleus ambiguus (vagus and accessory) result in the syndrome of Schmidt.

Affections in the jugular foramen or in region of posterior lacertus foramen cause paralysis of the ninth, tenth and eleventh nerves or the syndrome of Vernet.

Affections of the vagus in the retro-parotid space would cause paralysis of the ninth, tenth, eleventh and twelfth nerves or the syndrome of Collet and Sicord. If the sympathetic is also involved it is called the syndrome of Villoret.

According to Semon law, fibers going to the abductor muscles are the first involved, and the adductors continue to act for a variable time.

In a progressive organic lesion the muscles are affected in the following order:

- (1) The abductors or the arytenoid posticus.
- (2) The tensors or the arytenoidi interni.
- (3) The adductors or the arytenoid laterales.

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Unless the lesion is so gross that complete paralysis occurs the abductor muscles are for a time the only ones affected.

In recovery from complete paralysis the reverse order is observed.

ETIOLOGY

Cortical paralysis is hardly ever isolated, generally secondary to hemiplegia.

Bulbar lesions nearly always cause paralysis of the dilators. Vocal cord cannot be abducted, patient asphyxiated but can speak, as cords are in position of phonation; makes a snoring sound. It is generally due to the syphilis, having the Argyll Robertson pupil also.

In tabes we may have paralysis as a first symptom often affecting both cords with above symptoms. If the paralysis is bilateral it is generally central but central lesions are more often unilateral, but may have bulbar paralysis due to gummas, abscesses, sclerosis, syringomyelia affecting the bulb. Bulbar lesions often affect both the tongue and palate also.

LESIONS IN THE MOTOR FIBERS IN THE VAGUS TRUNK OR RECURRENT LARYNGEAL

Pressure and direct traumatic and operative injuries to the vagus or recurrent laryngeal as in ligature of vessels. Intracranial growths, injuries, hemorrhages or abscesses at base of the skull. Growths and infections in the neck involving vagus close to its exit, close to the skull as in the retro-parotid space or pharyno-maxillary fossa and cervical phlegmons, etc.

Pericarditis for the left nerve, pleural thickenings at the apex of the lung more for the right side. Dilated left auricle or aneurysm of arch of aorta for the left nerve.

Pleural effusions, enlarged bronchial or tracheal glands.

DISEASES OF MEDIASTINAL TISSUES AND GLANDS, CARCINOMA, SARCOMA, TUBERCULOSIS, SYPHILIS AND LYMPHOSARCOMA

Recurrent paralysis often is an early sign of carcinoma of the esophagus, but more often late; if on the right side, the lesion is high up. Malignant tumors of the thyroid, but benign are rare; if benign they are usually cystic.

Following goiter operations due to

trauma hemorrhages, scar tissue or severing the nerve, peripheral neuritis of toxic origin from infection or drugs occurs.

Symptoms.—In the first stage when the posticus is paralyzed, there is no trouble with phonation, pathology only in respiration. Therefore it is found only on laryngoscopic examination; cord in cadaveric position later may be midline. Bilateral recurrent paralysis, however, at its earliest stage does attract attention, not by interference with the voice but by reason of the impediment to respiration, produced by cords, which, due to the unopposed action of the abductors, come to lie near the midline and more or less in contact with each other. The glottis being closed dyspnea results and asphyxia or even death may result as a consequence.

If there is dyspnea with unilateral abductor paralysis, some other cause of it should be sought below the larynx itself, as aortic aneurysm, mediastinal growths or esophageal neoplasm involving the trachea.

In the second stage the tensor of the cord is affected, the thyroid-arytenoideus internus, which causes a lower tone voice or diplophonia, cord is lax, and one can even see the vibrations of cord due to relaxed action. In respiration cord assumes cadaveric position.

In the third stage where the abductors, tensors, adductors or crico-arytenoideus laterales are affected, the paralysis is now complete.

On gentle, quiet respiration the condition may escape notice but on deep respiration the sound cord abducts widely from the middle line while the affected remains passive in the cadaveric position. It is only on phonation that the paralytic condition is distinctly manifested. Then the sound cord not only approaches the midline but may cross it in an effort of compensation to close the glottic space. The affected cord is stationary in the cadaveric position; its free edge remains concave and the voice is feeble and somewhat rough, altered in tone and pitch with an uncontrolled tendency to crack. The vocal cord is often atrophic in the later stages. In complete laryngeal paralysis bilateral on inspiration the cords approach each other, being more marked the greater the effort. This is probably due to the cords being sucked like a valve by the indrawn current of air and rarefaction of

air below the stenosis, or to the still slight action of the stenosis. These people may have inspiratory stridor on slight exertion, mental excitement, during sleep, onset of catarrh, etc.

ADDUCTOR PARALYSIS

Unilateral paralysis is extremely rare, and may be caused by a cold, syphilis, enteric fever, smallpox, or lead poisoning and local causes.

Bilateral paralysis is generally functional unless occurring as a part of a general paralysis of the recurrent nerve. It is found mostly in hysteria, anemia, general weakness, shell shock, neurasthenia and local inflammatory condition of the larynx, sudden emotion, fright, worry, pregnancy, intestinal distress, menstruation, disorders of digestion and intestinal worms, misuse or overuse of voice, tuberculosis, syphilis, typhoid, phosphorus, copper, arsenic and lead poisoning.

Symptoms.—Onset is sudden except in general weakness, where it is more gradual. Voice becomes weaker and more toneless.

In the hysterical form the voice is reduced to a whisper. There is no complaint

of dysphagia; no temperature or physical signs in lungs, but it is often seen in incipient tuberculosis. Examination shows cords in position of respiration. On deep inspiration gap is still wider. Trying to phonate, cords move very little toward midline, but trying to cough or laugh brings the cords to the midline.

PROGNOSIS

The outlook in double abductor paralysis is always very grave as any aggravation may end in fatal asphyxiation.

If only on one side there is no risk of death being due directly to the paralysis but it interferes with speaking, singing and coughing.

It is well to remember that, in addition to paralysis of the cord by aneurysm, esophageal cancer, goiter, there may be stenosis lower down, due to direct compression of the trachea or the bronchi from the same cause.

TREATMENT

We should treat the cause of the paralysis. Later we may use galvanism, strychnine, iodides, etc.

554 FISCHER BLDG.

A REPORT OF THREE CASES OF TRICHINIASIS WITH ONE DEATH*

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Ovoid cysts in human muscle were first described by Tiedman in 1822,¹ and by Hilton in 1832.² Leidy, in 1845,³ described them in the pig. In 1860,⁴ Zenker described both the intestinal and muscle forms in a girl and established their connection with this serious and often fatal disease.

The adult female parasite measures three to four mm. in length; the male one and one-half mm. in length. The larvæ or muscle trichinæ are from six-tenths to one mm. in length, and lie coiled in ovoid capsules which later may become calcified.

When flesh containing trichina is eaten, the capsule is digested, and the trichinæ are set free. They pass into the small intestine and in about three days are full grown and sexually mature. The female worm penetrates the mucosa of the intestine and deposits the embryos in the lymph spaces, from

whence they pass into the general circulation, reaching the voluntary muscles in about two weeks, where they develop into the full grown muscle form.

The *Trichinella spiralis* is found in the flesh of swine, dogs, cats, rats, mice and also in bears and their relatives. Even beef may contain the trichina. The parasites have been found in the abdominal cavity, pleural cavity, pericardium, and the meningeal spaces. Usually they remain in the blood

*Reported at Staff meeting of Mercy Hospital, April 12, 1932.

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stream until they reach the skeletal muscles. Even four to six weeks after ingestion of the trichina, migrating young parasites have been found in the organism, since the female deposits larvæ for several weeks, after which both male and female die. The larvæ

parasites ingested, while other writers differ, saying that it is no more logical than to assume that the number of streptococci entering the blood stream governs the degree of sepsis resulting.

Because of the public health aspect of this

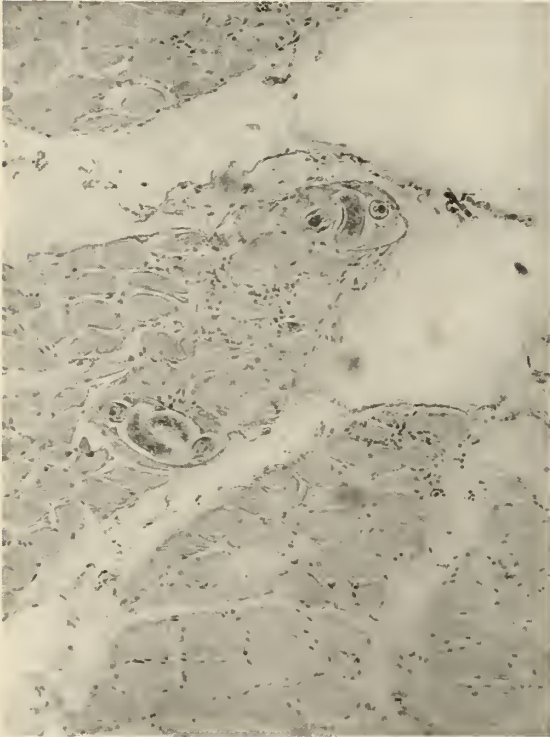


Fig. 1. Photomicrograph showing two *Trichinella spiralis* embedded in the voluntary muscle of the patient in the fatal case.

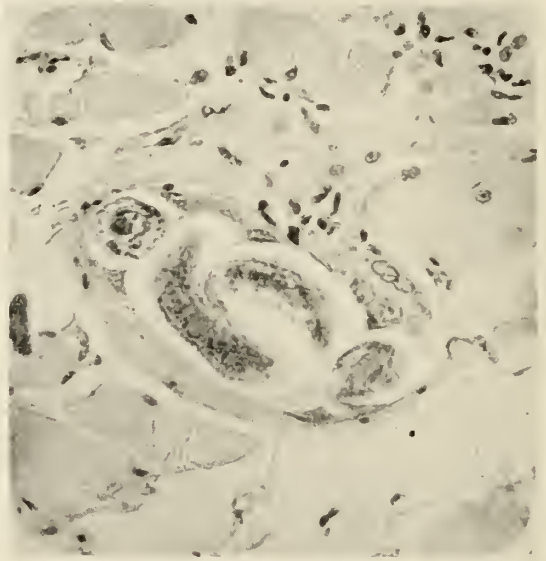


Fig. 2. A higher power photomicrograph of the lower left hand parasite shown in Figure 1.

are seldom found in stools. They have been found several times in the sediment of the blood of the cubital vein.

With the encysting of the larvæ, after the fifth week the morbid picture begins to lose the inflammatory and painful character, yielding to a protracted convalescence. Months and years later attacks of pain in the joints and muscles, fever and swelling may reappear. Such cases may be regarded as chronic trichiniasis. Cases with an unfavorable course usually succumb between the fourth and seventh week; fatal cases have been described due to intestinal complications. The mortality varies from nothing to 30 and 40 per cent. This high mortality shows that the morbid process is not limited to the muscles, but affects the organism as a whole.

The seriousness of the disease according to some writers depends on the number of

disease the following is a report of three cases:

On February 15, 1932, I was asked to see two patients of a family of three living four miles from the city of Benton Harbor. The family consisted of the husband, fifty-two years of age, the wife, forty-one, and a boy, seven years of age. They were all ambulatory, the little boy apparently not sick. The wife's temperature was 100, and her pulse 140. The husband had a temperature of 103.8, and a pulse of 120. I paid little attention to the boy as I was informed he had not been sick, and appeared well at the time. The wife's eyes were much swollen and the next day when she was taken to the hospital, her eyes were completely closed.

History: The wife had an onset of diarrhea four weeks prior to February 15, disappearing, then returning with renewed violence after a few days. The onset of the husband's symptoms was with diarrhea a few days after his wife. The son did not have diarrhea. Stools were frequent, from twelve to fifteen in twenty-four hours, and of an offensive odor, and greenish in color. They did not vomit at any time. The first thought of trichiniasis was the next day when blood examination showed a high eosinophile count in all three patients, ranging from 42 to 47 per cent. Water analysis of their shallow well was negative; Widal agglutination, blood culture, examination for *B. abortus*, and the examination of the stools were all negative. The swollen eyes, the muscular soreness, the great prostration, insomnia, anorexia, sweating, eosinophilia, and the history that they had eaten smoked, but raw, sausage led me to make a positive diagnosis of trichiniasis. I did not make a biopsy. A consultant saw the cases with me on February 25 and confirmed the diagnosis. The

wife died on February 26, at the beginning of the sixth week of illness, of cardiac failure and what was apparently paralysis of some of the respiratory muscles. She went down very rapidly for the last eight or ten hours, while twenty-four hours before her death she did not seem to be in any immediate danger.

The blood picture in the two adult cases was peculiar in so far as the leukocyte count is concerned. The wife had a count of 26,350, while the husband had a count of 6,250. There was a lowered polymorphonuclear count and an increase in the large lymphocytes. The erythrocytes were materially reduced, showing a marked secondary anemia.

The temperature in all three cases was for some time remittent ranging from 100 to 103. Later it was intermittent in the husband's case. One of the most pronounced symptoms was the great muscular weakness, the patients not being able to turn themselves in bed without great effort, or without assistance. The diarrhea ceased in the wife's case, but the husband still in the hospital (March 27) had three thin movements daily, and was so weak he could not sit up more than fifteen or twenty minutes at a time, although he had no fever for more than two weeks.

Dr. German of Grand Rapids, pathologist to the Benton Harbor Hospital, examined the tissue which was removed from the biceps of the wife after death. Following is his report: "Sections of voluntary muscle show there are many *Trichinella spiralis*. In a few places there is intense inflammation as shown by polynuclear infiltration." (Figs. 1 and 2.)

Samples of the sausage examined by the State Agricultural Department showed many *Trichinella spiralis*.

Treatment: There is little treatment of any effect after migration of the parasites. Calomel and castor oil are recommended and were given. Santonin and cacodylate of sodium were also given. Later ferric ammonii citratis was given for the anemia. Otherwise, the treatment was symptomatic.

Algora⁵ of Spain relates that there have been a number of cases of trichinosis in his district and that seven cases treated by intravenous injections of neoarsphenamine, .45 gm., promptly recovered. Two or three injections were usually necessary. In one case the edema and the fever subsided so promptly after the first injection, that there was no necessity to repeat it.

Wolfgang⁶ of Germany says neosalvarsan had no effect in his experience in some cases, but gave sufficiently good results to warrant its use in further cases.

Prophylaxis is the best treatment. Thorough cooking of all swine flesh will prevent the disease. Well kept pigs are much less likely to harbor trichinae than cats and dogs.

SUMMARY

1. Three cases of trichiniasis are reported. The source of the infestation determined and the parasites demonstrated in one case.

2. These cases showed that there is no definite ratio between the leukocyte count and the eosinophil count.

3. Though each case differed in severity the eosinophilia was the same and hence it

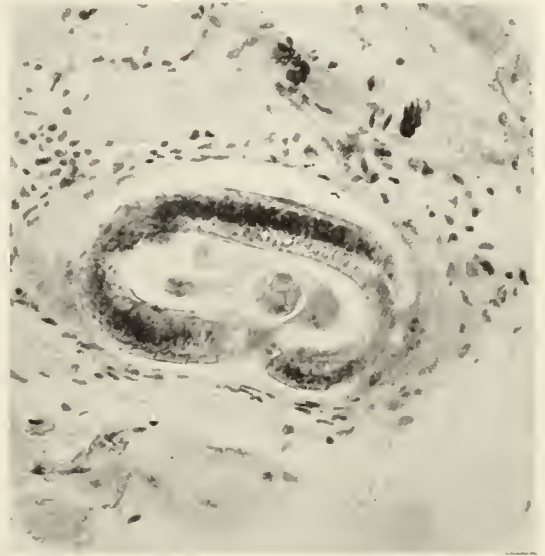


Fig. 3. High power photomicrograph of parasite embedded in voluntary muscle surrounded by a zone of cellular reaction.

is not an index to the severity of the disease.

4. The disease began differently in the different members of the family and one did not possess any of the pathognomonic signs of the disease, such as edema of the eyelids, muscular pains, remittent fever and gastrointestinal manifestations.

The feeding of infected meat of dead animals to pigs is probably a factor in the maintenance of the disease. This is not uncommonly done by some cities where garbage disposal plants are not available. The United States Bureau of Animal Industry require 58.33° C. as the minimum temperature at which all pork products must be cooked in establishments operating under federal inspection. This inspection is not done on hogs sold from city garbage dumps where the chance of becoming infested by trichina is great, and hence cases like the above described are not infrequent.

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A CASE OF PRIMARY CARCINOMA OF THE LIVER IN AN INFANT

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In 1929, Kilfoy and Terry¹ reported a case of primary carcinoma of the liver in a child and collected from the literature forty-three other cases, sixteen of which they regarded as authenticated. A case was described by Taillens² in 1930. To these we wish to add another to emphasize the importance of considering carcinoma of the liver in a differential diagnosis of tumors of the abdomen in children.

REPORT OF A CASE

B. J., the patient, was in good health until the age of eleven months, when he developed a diarrhea which proved resistant to treatment. When he was fourteen months old, his mother noticed a mass in the right side of the abdomen. He was seen by numerous physicians and also at a university clinic. Here his hemoglobin was found to be 37 per cent and his white count 19,200 with 62 per cent polymorphonuclear leukocytes. The morphology of the red cells suggested chronic hemorrhage; no abnormal white cells were seen. The urine was negative. A roentgenogram showed an irregular dense shadow in the central abdomen, due, it was thought, to a retroperitoneal tumor or to a tumor of the right kidney. There was no visualization with skiodan.

to the pallor (the hemoglobin was 39 per cent Sahli), and to the enlargement of the right side of the abdomen, where a hard mass was felt, apparently the right kidney, although inseparable from the liver, which was definitely a hand's breadth below the rib margin. No fluid wave was demonstrable. The white count before operation was 28,000 with 86 per cent polymorphonuclear leukocytes.

At operation, the kidney was found to be grossly normal but the liver nodular and greatly enlarged. There was a moderate amount of bloody fluid in the peritoneal cavity. The question of a luetic infection was considered but because of negative Kahn tests on mother, father, and child, the diagnosis of primary carcinoma of the liver was made. After the operation, the liver increased rapidly in size and the child died three days postoperatively.

A partial necropsy was done. The only grossly

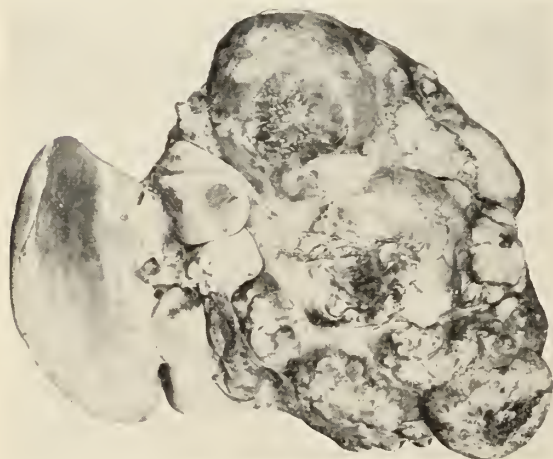


Fig. 1. Posterior surface of liver.

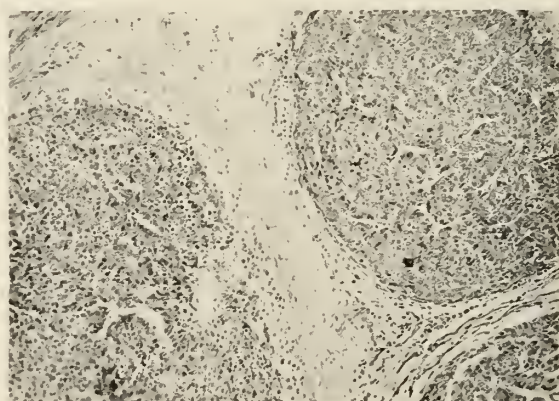


Fig. 2. Low power microscopic picture.

Later Dr. Van Hoosen of Chicago obtained excellent plates with uroselectan. On the basis of these plates, the finding of pus in the urine, and a fever rising at times to 103, a diagnosis of hydronephrosis of the right kidney with possible tumor was made, and on October 24, 1931, the child was admitted to the Woman's Hospital, Detroit, for an exploratory operation. He had been restless and seemingly in pain for the two days previously and he had had a cough for a week.

Examination at time of entrance called attention

pathological organ in the abdomen was the liver, which measured 19 by 21 cm. The right lobe extended down to the pelvis. It was covered with irregular cauliflower-like masses from one to five centimeters in diameter. At the upper pole was a large nodule mottled with blood and fluctuant. On the posterior surface very little normal liver tissue was seen (Fig. 1). The left lobe was apparently uninvolved. On section, the nodules extended through the stroma of the right lobe and the larger ones showed varying stages of necrosis. Microscopic examination revealed circumscribed areas of darkly staining small anaplastic cells arranged in columns and acini (Fig. 2). There were scattered mitotic figures. The left lobe, while grossly free from malignant changes, showed emboli of carcinomatous cells. The final diagnosis was primary carcinoma of the liver, probably bile-duct type.

[†]Dr. Merle Pierson is a graduate of the Medical School, University of Michigan, 1922. Practice limited to pediatrics.

[‡]Dr. Mary Campbell is a graduate of the Detroit College of Medicine and Surgery, 1922. She is a member of the staff of the Woman's Hospital, Detroit.

COMMENT

The clinical symptoms of primary carcinoma of the liver are few and in no way characteristic since they depend on the effects of pressure by the tumor and on necrosis and hemorrhage in its substance. Jaundice is rare. The metastases are intrahepatic and occasionally to the lungs. Liver function tests may be helpful. Nadler³ mentions also the occasional finding of hypoglycemia in primary liver cell carcinoma. Again, elevation of temperature and of white count are common in carcinoma, especially of the liver.

Such cases as the above are perhaps more frequent than reports from the literature

would indicate, since a similar case was discovered in a local hospital in October, 1931. In 1907, Philipp⁴ pointed out that 13 per cent of all cancers in childhood occur primarily in the liver, in adults only 6 per cent. Consequently, when confronted with a tumor of the abdomen in a child, one would do well in the differential diagnosis to consider primary carcinoma of the liver.

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MICHIGAN'S DEPARTMENT OF HEALTH

C. C. SLEMONS, Dr.P.H., M.D.,
Health Commissioner
LANSING, MICHIGAN

REGISTERED LABORATORIES

All laboratories in Michigan making chemical, serological or bacteriological tests to aid in the diagnosis of communicable disease and laboratories where live pathogenic germs are handled are required by law to register with the Michigan Department of Health. The list of registered laboratories as of May, 1932, follows:

LABORATORIES REGISTERED UNDER ACT NO.
45, PUBLIC ACTS OF 1931

An act to protect the public health; to provide for the registration and supervision of public laboratories making chemical, serological and/or bacteriological laboratory tests to aid in the diagnosis and/or control of communicable disease; and to prescribe penalties for violation thereof.

May, 1932

Reg. No.	Location	Name of Laboratory
133	Albion	Sheldon Memorial Hospital
4	Ann Arbor	City Laboratory
75		Cowie Hospital
129		Dept. Ped. & Infect. Disease
		University Hospital
144		Pasteur Institute
5		St. Joseph's Mercy Hospital
127		University Health Service
6		University of Michigan Hospital
10	Battle Creek	City Health Department
11		L. Y. Post Montgomery Hospital
70		Nichols Memorial Hospital
13	Bay City	City Health Department
137		Jones Clinic
14		Mercy Hospital
122	Coldwater	State Public School
76	Detroit	W. L. Brosius Laboratory

140		Chas. Godwin Jennings Hospital
18		Children's Hospital
100		H. L. Clark Clinical
17		Delray General Hospital
1		Detroit Department of Health
88		Dunbar Memorial Hospital
143		Eye, Ear, Nose & Throat Hospital
136		Florence Crittenton Hospital
21		Grace Hospital
73		Harper Hospital
22		Henry Ford Hospital
142		Medical Clinic
23		H. A. Meinke Laboratories
135		Motor City Testing (water, milk)
24		Nat'l Pathological Laboratory
102		North End Clinic
25		Owen Clinical Laboratory
131		Perry Testing (water, milk)
26		Physicians' Service Laboratory
27		Providence Hospital
28		Receiving Hospital
67		Robison Laboratories, Inc.
31		St. Joseph's Mercy Hospital
32		St. Mary's Hospital
95		Stafford Biological Laboratories
117		Woman's Hospital
139		Wells Drake Laboratory
33	East Lansing	Michigan State College
97	Eloise	Eloise Hospital
35	Flint	Board of Health
36		Hurley Hospital
112		Women's Hospital
38	Grand Rapids	Blodgett Memorial Hospital
37		Butterworth Hospital
40		Brotherhood Private Laboratory
41		St. Mary's Clinical
42		Western Michigan Clinical
2		West. Mich. Division, Mich. D. Health
116	Grosse Pointe	Cottage Hospital
94	Hamtramck	Public Health Laboratory
44	Highland Park	General Hospital
124	Howell	Michigan State Sanatorium
3	Houghton	Branch Laboratory, Mich. D. Health
43	Ironwood	Grand View Hospital
130	Ishpeming	Ishpeming Hospital
87	Jackson	Jackson Clinic
45		Mercy Hospital
91		Bronson Methodist Hospital
119	Kalamazoo	Fairmount Hospital
47		Kal. Public Health Laboratory
48		Kalamazoo State Hospital
46		New Borgess Hospital
121	Lansing	Edw. Sparrow Hospital
0		Michigan Department of Health
69		St. Lawrence Hospital
125	Lapeer	Michigan Home & Training School
145	Ludington	Paulina Stearns Hospital
126	Marquette	Morgan Heights Sanatorium
134		St. Luke's Hospital

141	Monroe	Diagnostic Clinic
104		Mercy Hospital
51	Mt. Clemens	Braun Clinical Laboratory
68		Persson Foundation
50		St. Joseph Hospital
53	Muskegon	Hackley Hospital
54		Mercy Hospital
118	Niles	Pawating Hospital Clinical
111	Northville	Wm. H. Maybury Sanatorium
123		Wayne County Training School
55	Olivet	Olivet College
107	Owosso	Memorial Hospital
66	Petoskey	Petoskey Hospital
56	Pontiac	Dept. of Public Health
71		Pontiac General Hospital
57		Oakland Co. Health Dept.
128		Pontiac State Hospital
132		St. Joseph Mercy Hospital
120	Port Huron	Port Huron Hospital
58		St. Clair County
83	Roseville	Department of Health
108	St. Johns	Clinton Memorial Hospital
59	Saginaw	Central Laboratory
62	Traverse City	Traverse City State Hospital
63	Wyandotte	Wyandotte General Hospital

Sault Ste. Marie	Chippewa Co. War Memorial Hospital
Sturgis	Memorial Hospital
Three Rivers	Three Rivers Hospital
Ypsilanti	Beyer Memorial Hospital

PRESENT STATUS OF LIGHT THERAPY: SCIENTIFIC AND PRACTICAL ASPECTS

Edgar Mayer, Saranac Lake, N. Y., states that although there is much information concerning results of irradiating man and animals, explanations and indisputable generalizations are sadly lacking. When it is realized that even in photochemical reactions the physical process is not completely understood, the difficulty of explanation in biology and clinical medicine becomes more evident. No single explanatory hypothesis for the results ascribed to light action can yet be formulated, as there is great need of data obtained under definitely controlled conditions of dosage, intensity and wavelengths in normal and in abnormal organisms. There is a lack of agreement between the practical and therapeutic results and the scientific and experimental observations. Experiments have been carried out for the most part on healthy men and animals, whereas usually the practical results have been obtained on the sick. The abnormal organism is much more sensitive. Diseased tissue may vary from normal in sensitiveness to radiation. The animal skin is not perhaps comparable to the same organ in man (as, for example, in exposing shaved guinea-pigs to sunlight, it is most difficult to produce erythema). In many reports the importance of sky radiation has been ignored, whereas it is possible that the beneficial effects of sunlight are in a great measure due to its luminous and infra-red portions. The sun, with its accompanying factors of environment, can hardly be compared to artificial sources of light. The exact physiologic effects of light or of the air bath alone are not clearly understood, nor is the effect of light on single cells. In application, dosage has been difficult to control, and marked variation in the effects comes from a small stimulative or a larger destructive dose of light. Similarly, the technic of application with most workers has been different. Published experiments lack specific details in many instances, especially those pertaining to the spectrum, such as its limits and the distribution and the character of the radiant energy employed. These must be defined accurately instead of attributing results merely to "ultraviolet energy." Perhaps this is the cause of the contradictory nature of many of the results published. Controversies constantly take place between the proponents of the use of sunlight and those of artificial sources. The value of sunlight for one form of disease against another, for instance pulmonary tuberculosis as against the extra-pulmonary forms, is a subject for debate. The advantages of different artificial sources of energy are still open questions. The workers in high altitudes are still enthusiastic in expounding their clinical results in contrast to those in the lowlands. This difference of opinion appears in part due to the fact that, in the development of the use of light for disease, only empiric results were known for many years before accepted laboratory evidence was produced which placed light therapy on a scientific basis. The author emphasizes the fact that harm may be done by the injudicious and uninformed use of light. Valuable as this method has proved itself to be in a limited number of diseases, it is surely clear that much more investigation and many more scientific data are required before light should be generally prescribed by those unfamiliar with the contraindications and the details of its application.—*Journal A. M. A.*

LABORATORIES NOT REQUIRED TO REGISTER FOR LABORATORY DIAGNOSIS BUT REGIS- TERED FOR HANDLING PATHOGENIC ORGANISMS UNDER ACT NO. 157, PUBLIC ACTS 1931

An act to protect the public health; to provide for the registration and supervision of laboratories where live pathogenic germs are handled; to prevent the use of bacteria for criminal purposes; to eliminate careless methods of transporting live germs, and to prescribe penalties for the violation of this act.

May, 1932

Reg. No.	Location	Name of Laboratory
98	Albion	Albion College
74	Ann Arbor	Hygienic Laboratory, University of Michigan
82		Michigan Biol. Supply Co.
7	Battle Creek	American Legion Hospital
8		Battle Creek College
86	Detroit	Cass Technical High School
138		College of City of Detroit
96		Detroit College of Med. & Surgery
19		Difco Laboratories
20		Frederick Stearns & Co.
89		Marygrove College
65		Parke Davis & Company
30		G. H. Sherman
39	Grand Rapids	Burleson Sanitarium
77		Junior College
80	Holland	Hope College
103	Highland Park	Highland Park Water Department
101	Iron Mountain	City Water Department
81	Kalamazoo	The Upjohn Company
99	Lansing	Bio. Products Division, Mich. D. Health
93		Michigan Dept. of Agriculture

LABORATORIES REGISTRATION PENDING

Location	Name
Alma	Griati General Hospital
Battle Creek	Battle Creek Sanitarium
Detroit	East Side General Hospital
Escanaba	St. Francis Hospital
Goodrich	Goodrich Hospital
Howell	McPherson Memorial Hospital
Iron Mountain	Itzoff Clinical Laboratory
Jackson	City Department of Health
Jackson	Foote Memorial Hospital
Menominee	St. Joseph's Hospital
Newberry	Newberry State Hospital

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JULY, 1932

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon

EDITORIAL

HEALING CULTS

The committee on the Cost of Medical Care have considered the healing cults. The results of their study are embodied in a volume, *The Healing Cults: A Study of Sectarian Medical Practice; Its Extent, Causes and Control*. There are 36,000 individuals other than the 142,000 trained and licensed members of the medical profession who hold themselves out as able to treat the sick. The four main groups of healers comprise osteopaths to the number of 7,650 with forty-two million dollars spent annually for their services; 16,000 chiropractors who receive sixty-three million dollars;

naturopaths and allied groups 2,500 who receive ten million dollars; and christian scientists and new thought healers, ten thousand in number, to whom is paid the sum of ten million dollars. The medical training of these cults is said to be inferior to that of physicians or to be entirely lacking. Commenting, the author states, which is only too apparent, that the existence of so large a number of sectarian practitioners is dangerous to the public's health and much of the one-hundred and twenty-five million dollars is not wisely spent.

The control of such a situation entails first a study of the causes which brought the cultist into being. Of the non-religious sectarians the osteopath presents the best claims. Yet the training received by the osteopath is much inferior to that received by the regular doctor of medicine. The chiropractor and the naturopath are to a large extent ignorant of the established facts of medicine and are therefore a menace to public health. The individuals who practice religious healing do not pretend to be doctors. It is readily apparent to the medically trained mind that such groups produce a serious situation in as much as pathologic conditions which might have received help had they been detected early, are permitted to progress until too late for medical or surgical relief—such surgical conditions as cancer and acute appendicitis or such medical conditions as diphtheria, malaria or syphilis. The author refers to the folly of communities which maintain an elaborate public health machinery to prevent the spread of certain communicable diseases, in permitting individuals to practice who are unable to distinguish diphtheria from pneumonia or scarlet fever from measles. The non-religious sectarians are possible owing to popular ignorance which looks upon a cult as possessing merit because it happens to be new as compared with a profession which has had a long period of evolution. The religious sectarians owe their existence in part to the fact that doctors have failed to give attention to what they considered minor functional ailments.

There are two ways of meeting the situation. First, legal, which involves the suppression of sectarians by the law; the other educational, which involves education of the public in health matters, and which involves a training of the would-be cultist by insisting on passing examination in the sciences

basic to the healing art. This latter involves a single minimum standard of qualification of all healing practitioners. Basic science laws so-called are in operation in six states of the Union as well as in the District of Columbia. These laws provide that all those who treat disease or hold themselves out to do so irrespective of whatever schools they belong to, or whatever healing agent or agents they use, before being eligible for license must pass examinations in the so-called basic sciences. These basic science laws have been found to work satisfactorily. The number of incoming cultists has been drastically reduced. Of those who do qualify by passing the basic science laws, the training they have received has a tendency to breed caution on their part with the result that little, if any, harm is done to the public.

PROPHYLAXIS AGAINST MALPRAXIS

Medico-legal defense committees in connection with county medical and state medical societies find an increasing number of malpractice suits against members of the medical profession. This is to be expected considering the prevailing financial depression. A great many of these claims, probably the majority of them, are groundless as shown when they come to trial. However, no one wants to face the uncertainty of outcome and expense of defense even though there may be no just grounds for complaint on the part of the patient. A great many of these threats might be obviated if members of our profession exercised more discretion in listening to the complaints of dissatisfied patients of other doctors. The board of censors of a county medical society in one of the southern states has sent broadcast a letter to each of its members from which we quote the following paragraph:

"From information at hand it seems that not infrequently the seed of dissatisfaction is, perhaps unintentionally, sown by a fellow doctor, especially where a change in doctors has been made during the course of an illness. The Board of Censors feels sure that no member of this society would purposely create the feeling on the part of a patient or his family that another doctor had been negligent or had handled a case improperly, but it wishes to call your attention to the necessity for caution in discussing with laymen any other doctor's handling of a case. The layman's statement as to what another doctor did under given circumstances cannot always be relied upon as to accuracy, so we should not criticize the other doctor because of such statement, even though the statement may make it appear that criticism may be justified. In discussing

methods of treatment, one method as compared with another may be only a matter of individual preference on the doctor's part and not one vital in principle. The layman is not likely to understand this, and too much talk, which may appear harmless to the doctor, may start an unnecessary and unwarranted damage suit."

The letter concludes with the advice that each of us adopt the Golden Rule in our relations with our fellow practitioners. We will then avoid even an implied criticism of any other doctor in the handling of any given case.

THE FILAMENT-NONFILAMENT COUNT

Renewed interest is being displayed in hematology by clinicians and particular attention is being paid to those methods that have been developed to furnish a ready means of observing more closely the contest between invader and host in infection. Arneith's original method of classifying the polynuclear cells, with its complicated technic, has of late been simplified so that the "polys" are divided simply into old or filament, and young or non-filament cells, the latter offering an accurate index of the severity of an infectious process. This modification known as the filament-nonfilament count is rapidly replacing the commonly used differential count and many hospital laboratories are adopting it as a routine procedure.

The paper entitled, "The Routine Use of the Filament-Nonfilament Count" which is published on page 443 of this issue of the Journal, details the experience with this valuable clinical aid in a series of one hundred hospital patients. It offers the reader a clear explanation of the method so that he may at least know how to interpret a count of this kind when it is made for him.

TAXATION

It is probably within the truth to say that there never was a fair and equitable system of taxation. Direct taxation tends to penalize thrift and industry and to place a premium on incompetence and indolence. The State (using the term to mean organized government) requires money; it proceeds to obtain it in the easiest way. Real property is stable and tangible, therefore it comes in for the burden of taxation. If not paid within a specified time the property in question may be confiscated and sold for taxes,

as we have numerous instances before us. Should there not be some other basis for taxation than real estate? Rentals of course are taxed as income. We have opposed the extension of the income tax, because of the fact that, through exemptions, it is limited to comparatively few persons. The tax should be as democratic as the vote. There might not be the same objection to income tax if every person who earned an income, no matter how small, paid his portion, even though that portion might be only a few cents. There should be no class of earner exempt whether he is a government employee or not and no part of any person's income should be exempt. The taxation of incomes under such a scheme would be a tax on production, that is on a man's earning power, which would be more just than a tax on his home; his home thereby would be protected in the event of his non-employment; or, in the case of his death, the home would be preserved for his widow and family, who perhaps might not be in a position to pay taxes. In guaranteeing the rights and liberties of the citizens of the United States it is doubtful if the makers of the constitution ever meant that a man should forfeit his home to the state owing to his inability to pay taxes on it.

Of course there are many other legitimate sources of taxation. There seems no valid reason why luxuries of all kinds should not bear a share of the burden. A sales tax of some sort is an equitable tax; paid once it should do away with the personal tax whereby one is taxed year after year until he in the end pays more tax than the article cost him. The personal tax is in many instances the most iniquitous impost that has been devised. It is as a rule discriminatory, imposing a burden upon those who fill out the forms properly and favoring those who are disposed to place their surplus funds in non-taxable securities.

A good basis for taxation would be incomes, that is the income of everybody who is engaged in any gainful pursuit and no exemptions. Luxuries, all of them, might well be taxed. In addition to this the sales tax paid once when an article is purchased would do away with all future imposts by city, county and state.

What, however, is universally needed is economy and retrenchment in the management of civic affairs. We have been assured recently by the Governor of Michigan

in an address before the Wayne County Medical Society that the legislators at the last session of the Michigan State legislature worked in the interests of retrenchment and economy throughout. May their example be followed by the cities and by the nation.

A BIT OF MEDICAL HISTORY

THE FALLOW CENTURIES

The period from the death of Galen to the beginning of the thirteenth century from the point of view of achievement in western European medicine is the briefest epoch in medical history. There are a number of very plausible explanations of this fact. The so-called Dark Ages, however, are not easy to understand, for obvious reasons. It is difficult for modern man to project himself back to a time when the things which make for modernity did not exist. "Built up on the ruins of an ancient system," says Marvin,* "and full of new life seeking fresh forms and outlets for its vigour, the mediæval system impresses us at first more perhaps by its wealth of contradictions than by any one of the special features which have led them to call it, sometimes the 'age of faith,' sometimes the 'dark ages,' sometimes the 'age of chivalry,' sometimes the 'age of law.' It exhibits elements which justify them all, kings celebrated for their services to learning who had never learnt to write, orgies of savage cruelty in the interests of the purest of religions, loose lives and ecstatic aspirations, rough hands and meticulous theory." What we understand today as mediævalism was fostered by the reaction of Christian life, which looked upon Greek literature, philosophy and science as pagan. There was an effort to destroy everything emanating from pagan countries, which did not cease until 1564. Greek culture had been always more or less distinct from Greek religion so that it developed practically unhindered until Greece was finally absorbed by Rome.

The beginning of the Dark Ages, as well as the dawn of early modern times, was not marked by any definite dates. The transition from Greek learning to mediævalism was gradual, as was also the emergence from darkness in the thirteenth and fourteenth centuries.

* * *

*The Living Past. F. S. Marvin.

The downfall of Rome left Europe practically nationless. The continent was at the mercy of barbarians, organized, if such it may be called, into loose tribal groups. The greatest need of humanity was for spiritual uplift* rather than for intellectual advancement. The invasions of the Goths and Vandals were due largely to the fact that they themselves were driven by the Tartar tribes from the north into Italy and Greece and other parts of southern Europe in successive waves which continued from 250 to 450 A. D. and sporadically for several centuries later. The invasion of the Goths destroyed the culture of southern Europe that had taken several centuries to develop. The social condition therefore was ripe for the Christian church with its ritual and attractive symbolism. During the first century or so of the Christian era there was a struggle for supremacy at Rome between Christianity and Mithraism† but eventually the Christian movement triumphed. The period of history which we are considering embraced the age of the crusades; it was likewise the age of chivalry; it was also a time when hermits betook themselves to the solitary places of the earth and founded monasteries.

Rome's influence upon civilization consisted in carrying law and order with her, and in the promotion of public works. She excelled in military organization, in colonization and government. The Roman was a material civilization. Rome inherited Greek scientific and philosophic learning but was incapable of fostering it and of passing on the torch. Medicine in Rome was not undertaken by the best minds. As noted, Galen died in the year 200 A. D. He was followed by nothing but compilers and quacks, for little original work in medicine was accomplished. Only a few names stand out and these constitute the Byzantine school. Oribasius, physician to the Emperor Julian the Apostate, was the last medical writer of importance in the ancient world. His work consisted of a collection of medical writings comprising seventy-two books, the value of which consisted in their being largely quotations from the works of

earlier writers, thereby rescuing the works of the earlier writers which might otherwise have been lost to posterity. Paulus Ægineta (625-690) or Paul of Ægina, in 660, produced a volume, an epitome of medicine, wholly wanting in originality, consisting as it did of quotations from Oribasius and Galen. He declared that the ancients had written all there was to know about medicine and that he was simply their humble scribe. Other Byzantine physicians were: Aëtius, who compiled a work to which must be credited what is known about Rufus of Ephesus and of Leonides in surgery and of Soranus in gynecology, and Alexander of Tralles (525-605), the only one of the Byzantine compilers, according to Garrison, who displayed any originality. The three representatives of early Byzantine medicine it will be seen produced works of a high historico-literary value since they filled in the gaps with their translation and compilation where the original writings had been lost.

* * *

In the east medicine was carried on through the Byzantine period (576-732 A.D.) and the Mohammedan and Jewish periods (732-1096 A.D.). The word *carried* is used advisedly inasmuch as little or nothing of value was added to the legacy of the Greek tradition, particularly during the first epoch. "Degeneration of mind and body with consequent relaxation of morals," writes Garrison,* "led to mysticism and the respect for the authority of magic and the supernatural which was to pave the way for the bigotry, dogmatism and mental inertia of the middle ages." Sir Clifford Allbutt referring to the Byzantine period says that "the chief movements of learning were started in Byzantium until western Europe was fit to take care of them."

Greek medicine had become transmitted to the east through Syria which during the rule of the Seleucidæ had become thoroughly under Greek influence. The Christian church had aided the expansion of Greek culture eastward during the third century through its missionary activity in founding schools in Mesopotamia; important to the work in hand was that of the church founded at Edessa. Much scholarship prevailed in all branches of learning of the time including theology and medicine. The

*As a means of shedding light on the mental and spiritual life of Europe during the Dark and Middle Ages, Lecky's *History of European Morals* is invaluable. It is a scholarly work of most fascinating interest to the lover of history, whether medical or social.

†Mithraism was a cult in ancient Rome closely resembling Christianity in its mysteries and sacraments. It was the prevailing religion among the Roman legionaries who carried it throughout the Empire. Mithraism was the most serious rival of Christianity during the later years of paganism.

**History of Medicine.* Garrison, page 121.

most eminent translator was Sergius, a presbyter and physician, who translated during the first half of the sixth century the works of Hippocrates and Galen into the Syrian vernacular. The Nestorian sect of which Sergius was a distinguished member were the heretics of the time and soon meet with the brand of argument that the orthodoxy is wont to use with its opponents. They were banished from the Byzantine Empire into Persia. The Nestorians about the end of the fifth century A.D. founded a school for medical training along with their church school at Jondisabur. The Nestorian school persisted until the Persians came under Mohammedan rule. To this school is ascribed the impetus which was to lead to the rapid development of Arabian medicine. Near the end of the sixth century A.D. the outlook for medicine was rather dark not only in Byzantium but also in Rome and Italy. But it was the darkness that was to precede the dawn. The great Arab Renaissance was to follow in the wake of Byzantine medicine.

* * *

We have been accustomed from our early historical study to withhold the benefit of the doubt from the Arabs. Creasy* has taught us to look upon the battle of Tours of the early eighth century in which Charles Martel defeated the Saracens, as "one of the fifteen decisive battles of the world," in which this defeat meant the greater freedom of the race in Europe. And again in the eleventh and twelfth centuries the crusades were carried on in a vigorous attempt to rescue the tomb of the Saviour from despoliation at the hands of the Saracens. Sir Walter Scott in his novel, *The Talisman*, has also presented us with fixed ideas unfavorable to this semitic race. Much, however, has been accomplished in the way of research that will have the effect of placing Arabia in a different and probably in a better light so far as impartial observers are concerned. It now appears possible that Arabian culture had a great deal to do with the awakening known as the Renaissance which had its beginning in Italy. The ancient University of Salerno as well as that of Padua drew very largely from Arab culture which had become implanted about the

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Mediterranean from the seventh century onward until about the twelfth century.

The chief service rendered medicine by the Mohammedans consisted not only in preserving Greek culture pretty much as the physicians mentioned of the Byzantine school had done, but in their activity in other realms of thought. With them originated algebra, chemistry or alchemy, and geology; the numerals as we now use them; to them must be accredited the introduction of such necessities and conveniences as street lamps, window panes, fireworks, stringed instruments, perfumes and spices. To Islam, also, the monotheism of Galen and of Aristotle had a strong appeal. The medical writers of this period have been designated "Arabic" in as much as the Arabic language was their medium of expression. Many of the writers, however, were Persian or Spanish or Jewish by birth. The work of Sergius the Nestorian was revised, but, not content with this, Arab scholars of the ninth century undertook the task of producing extensive translations into Arabic of much of the classical Greek literature. During this century Arab control extended from India to Spain. The medical writings of the Arabian period were derived directly from Greece. Under the encouragement of the eastern rulers, the collection and copying of Greek manuscripts was undertaken so that we have the works of Hippocrates, Galen, Dioscorides as well as others turned into Arabic. This work of translating and compiling was pursued largely at Bagdad. Among the greatest physicians of the Eastern Caliphate were three Persians, namely, Rhazes (860-930 A.D.), Haly ben Abbas, who lived in the latter part of the tenth century, and Avicenna (980-1037). Rhazes was a great clinician, the first to describe smallpox, measles, or disease entities. The work of Abbas consisted of the "Royal Book," a treatise on medicine. The anatomical section of this work formed the entire source of knowledge of the subject at Salerno for a hundred years (1070-1170). Avicenna, a physician, wrote on geology and has been called "father" of this science. He is said to have been the first to describe the properties of sulphuric acid and of alcohol as well as to give directions for their manufacture. His importance in medical history consisted in his endeavor to produce a synthesis of the medical knowledge of his day,

*The Fifteen Decisive Battles of the World. E. S. Creasy.

at the same time correlating it with the work of Galen and Aristotle.

Among the Jewish physicians of this period was Isaac Judæus (855-955), who wrote a book on Uroscopy and another on Dietetics. Moses Maimonides (1135-1204), another Jewish physician, wrote a treatise on personal hygiene. He was born at Cordova, Spain. Other physicians of the Western Caliphate were Avenzoar and his pupil Averroes; both lived at Cordova during the twelfth century. Averroes was a philosopher and free thinker as well as physician.

* * *

We have followed Greek learning through its circuitous route about the Mediterranean to Spain and to Italy. Let us see what was happening during these centuries in the rest of Europe.

During the Middle Ages there was almost universal illiteracy. According to Coulton, a learned medieval scholar, "All medical thought is characterized, nominally at least, by the conviction that each man has a soul to save and that therefore salvation is the main end of every human being." "Although in their practise the monks as part of their rule of charity relieved the sick and thereby played the role of physician, they were in general forbidden to do so. 'To buy drugs, to consult physicians, to take medicine befits not religion,' they must not use earthly remedies at the risk of salvation. Many of the legends of the saints present the same idea of the incompatibility of religious virtue and the treatment of disease by any means but prayer."—Stubbs and Bligh.

* * *

According to Singer, Anglo-Saxon Leechdoms of the twelfth century and earlier provide us with the best account of the practise of medicine during the Dark Ages. These manuscripts are christianized versions of Latin originals badly translated, from the *herbarium* of Apuleius Barbarus. We discern in them persistence of primitive folklore in magic and medicine. The Saxon ideas persisted into the thirteenth century uninfluenced by the Norman invasion in the eleventh.

In this connection it is interesting to recall the mental equipment of Chaucer's Doctor of Physic, who was one of the merry company who gathered at Tabard Inn on the pilgrimage to Canterbury. The poet in his

Prologue to the Canterbury Tales presents a portrait of the doctor of the twelfth and thirteenth centuries, who was a man of good general education yet skilled in the magic of the time. Reference is made to his acquaintance with Æsculapius, Dioscorides, and Rufus, the early physician of Ephesus. His doctor of physic also showed a familiarity with the works of olde Ypocras (Hippocrates), Haley, an Arabian commentator on Galen of the eleventh century, and with Serapion and Avicenna. The physicians of the Arabian school evidently exerted a strong indirect influence over Chaucer's savant. However, up to his time only two English doctors were worthy of mention, John Gatesden, a court physician the first half of the fourteenth century, and Gilbertyn (Gilbertus Angelicus), who wrote about 1250. Chaucer's description in his quaint English runs as follows:

With us there was a DOCTOUR OF PHISIK;
In all this world ne was ther noon hym lik,
To speke of phisik and of surgerye;
For he was grounded in astronomye.
He kepte his pacient a ful greet deel
In houres, by his magyk natureel,
Wel koude he fortunen the ascendent
Of his ymages for his pacient.
He knew the cause of everich maladye,
Were it of hoot, or cold, of moyste, or drye,
And where they engendred and of what humour;
He was verray parfit praktisour.
The cause y-knowe and of his harm the roote,
Anon he yaf the sike man his boote.
Ful redy hadde he his apothecaries
To sende him drogges and his letuaries,
For ech of hem made oother for to wynne,
Hir frendshipe nas nat newe to bigynne.
Wel knew he the olde Esculapius
And Deyscorides, and eek Rufus,
Olde Ypocras, Haly and Galyen,
Serapion, Razis and Avycen,
Averrois, Damascien and Constantyn,
Bernard and Gatesden and Gilbertyn.
Of his diete mesurable was he,
For it was of no superfluitee,
But of greet norissyng and digestible.
His studies was but litel on the Bible.

The mention of Gilbert and John makes it of interest to go into some detail in regard to English medicine following the Norman conquest. Gilbert was the scholarly type and John of Gaddesden the fashionable doctor. Regarding native medicine as already mentioned, much of it was fantastic, a system of charms connected with ancient tribal customs. "By the end of the ninth century, it may be said that English medicine had become a blend of four separate streams—legendary versions of Hippocrates and Galen, derived at second hand from their Græco-Latin successors; a consider-

able infusion from the same source of Mediterranean and oriental magic discreetly tintured with Christianity but unchanged in essence; a native contribution of the same kind, similarly christianized; and a perhaps more trustworthy botanical lore, both indigenous and imported.”*

* * *

The chief practitioners were the higher monastic clergy. There was also an inferior order according to the Venerable Bede, called *medici* or leeches, who performed most of the surgical operations. In addition to these were the herbalists. The Anglo-Saxon Leech Book of the physician Bald compared very favorably with any work of its kind anywhere on the continent. It was the earliest medical work of Great Britain, appearing shortly after the death of Alfred the Great. The Leech Book contains many examples of charms such as the wearing of amulets; the saying of prayers in connection with certain herbs; the uttering of unintelligible formulæ. For example, “If wens pain a man in the heart,” the Leech Books advise, “let a maiden go to a spring, which runs due east, and ladle up a cupful, moving the cup with the stream, and sing over it the creed and Pater Noster, and then pour it into another vessel and ladle up some more so as to have these cups full. Do for nine days; soon it will be well with the man.” For flying venom and every venomous swelling the following is recommended: “On a Friday churn butter which has been milked from a neat or hind all of one color; and let it not be mingled with water. Sing over it nine times a litany and nine times a Pater Noster.” No great masters in Anglo-Saxon medicine were evolved, which was equally true of other western European countries.

Gilbert was born in 1166, just one hundred years after the Battle of Hastings. He was the first Englishman to achieve a continental reputation. He knew enough French to get along with, and also the rudiments of Latin. His medical training was obtained at Salerno, which, according to tradition, was founded by Charlemagne in 802 though it was not until several centuries later that it achieved the height of its fame. Gilbert’s chief work was his *Compendium* or *Laurca Medicinæ*. It was printed at

Lyons in 1510 and at Geneva in 1608. Its contents consisted of seven chapters, namely fevers, diseases of the head and nerves; diseases of the eye, face and ears; respiratory complaints and affections of the external members; diseases of the intestines; diseases of the liver, spleen and kidneys; diseases of the generative system. There are sections on cancer, gout, skin diseases and poisons. It was an early handbook on practice of medicine. Gilbert was the first to recognize the contagious nature of smallpox. He also maintained that the only treatment of cancer was surgical. He showed the influence, which he did not always credit, of the Arabian school of medicine. Gilbert died in the year 1230.

As for Chaucer’s other physician, John of Gaddesden, he is described as “Very artful in laying baits for the delicate, for the ladies, for the right; for the former he has such a tenderness that he condescends to instruct them even in perfumes and washes; especially some to dye their hair; and such a respect for the latter that he is always studying to invent some of the most select and dearest medicine for them; and if there is a very good thing indeed, he orders twice the quantity for them as he does for the poor.”*

John had an eye to the emoluments of his profession. To his fellow practitioners he tells how he cured twenty cases of dropsy by the use of spikenard but warns him to obtain their fee in advance. He describes a number of disagreeable ailments which a doctor can seldom make any money by their treatment. He was doubtless the kind of physician Chaucer had in mind,

“For gold in phisik is a cordial
Therefore he lovede gold in special.”

The description of Anglo-Saxon and early Norman medicine would apply elsewhere in Europe during the same long period before the dawn.

GEORGE CRABBE—THE POET (BRITISH MEDICAL JOURNAL)

So few people now remember George Crabbe, who died on February 3, 1832, that it is necessary to add “the poet” to identify him. Yet he has an interest for medical men because he began life as a doctor, with experience of Poor Law practice at its lowest, wrote poetry when he was himself as poor as a church mouse, and ended as a well-paid pluralist in the Church of England. The approaching centenary of his death has led to a reperusal of *The Village*

*The Harley Street Calendar. By H. H. Bashford. London Constable & Co., Ltd.

*Quoted from the Harley Street Calendar. H. H. Bashford.

and Tales of the Hall, and it is worth while, therefore, to recall his early struggles as a medical man. Born at Aldeburgh in Suffolk on December 24, 1754, he was the eldest of the six children of George Crabbe, schoolmaster, parish clerk, and collector of salt duties. George received some education at a school in Bungay, and was bound apprentice in 1768 to a doctor at Wickham Brook, near Bury St. Edmunds, who employed him as errand boy and farm laborer. Three years later, in 1771, he was transferred to Mr. Page, a surgeon at Woodbridge. There he met Sarah Elmy, the niece of a substantial yeoman at Parham, whom he married in 1783. Still poverty-stricken, he returned to Aldeburgh in 1775, and worked in a warehouse, publishing in the meantime a didactic poem in the style of Pope, called *Inebriety*, and working steadily as circumstances allowed at medicine and surgery. He obtained sufficient money to take him to London, where he appears to have "walked the hospitals" for a short time, but what hospitals is not known. He then returned to Aldeburgh, put a few bottles in a shop window with a small collection of herbs and drugs on the shelves, and started as an apothecary. The venture proved unsuccessful, and after two years he discontinued it, shut up shop, and determined to cultivate literature. For this purpose he borrowed five pounds, and after paying his debts sailed to London with a box of surgical instruments, three pounds in cash, and some manuscripts. Things went ill with him for eight months, but early in 1781 Burke came to his assistance, and from that time forward he went from good to better. Acting on Burke's advice he abandoned medicine and was ordained as curate to the Rector of Aldeburgh on December 21, 1781. Two years later Lord Thurlow described him as being "as like Parson Adams as twelve to the dozen," and gave him a couple of small livings in Dorsetshire, transferring him six years later to those of Muston and Allington in the Vale of Belvoir. He was subsequently transferred to the rectory of Trowbridge in Wiltshire, where he died. Crabbe's recollections of medicine as he knew it were not flattering. He describes the village practitioner as:

"A potnt quack long versed in human ills,
Who first insults the victim whom he kills;
Whose murderous hand a drowsy bench protect,
And whose most tender mercy is neglect.
Paid by the parish for attendance here,
He wears contempt upon his sapient sneer;
In haste he seeks the bed where misery lies,
Impatience marked in his averted eyes,
And, some habitual queries hurried o'er,
Without rcply, he rushes to the door."

EXCESSIVE EATING AND EXERCISE

New England Journal of Medicine

The United States Public Health Service has made public its advice with reference to eating and exercise, paying especial attention to the fact that too little or too much eating or exercise is detrimental to a marked degree.

It is especially emphasized in this statement that proper food must be taken to provide material for growth and repair and to furnish heat and energy for the body. The condition of the circulatory system is of great importance in augmenting the benefits of proper food and exercise. So far as exercise is concerned, it is becoming recognized that arteriosclerosis may be promoted by overexercise quite as much as by irregularities of eating. In a few words it may be said that the arteries are the registry of our indulgences, or of any other form of physical dissipation.

THE APPLE VS. THE DOCTOR

A New York scientist is reported as having discovered a way of putting a real "blush" to otherwise pallid apples and peaches by exposing the fruit to the infra-red rays. This bit of scientific information has called for the following from the Manchester Guardian poet.

Dear me, how the scope of such dodges and dope
Is daily drawn out and extended,
When a dish of dessert has to put on a spurt
If it wants its appearance commended!

Why, even the peach cannot nowadays reach
Perfection without a cosmetic!
And that blush that you seek on the apple's smooth
cheek,
Is it lent by the sun, or synthetic?

You might as well know that the sought-after glow
Is probably due to long study—
Through some radiant ramp with an up-to-date lamp
That apple grew rosy and ruddy.

But when apples grow ripe by a trick of that type,
Is it certain they comfort and nourish?
Are the vitamins there as they formerly were?
Do the proteins and calories flourish?

By fruit of this kind with a duly doped rind
Can health be protected and proctored—
Will an apple a day keep the doctor away
When the apple itself has been doctored?

MEN MADE OVER

Weel, we've just foond oot that th' Seven Wonders o' th' worl' hae noo dwindled awa back intil insignificance, alangside o' th' thing that a maun has been promising tae do in medicine.

We noo hae a quack Döctor wha is guarantin' tae mak' over th' morons, an' th' illiterates, an' th' insane an' th' feeble minded, an' th' ignorant, an' ithers o' this kind wha we find a' o'er this bonnie country.

Mon! bit he's ga'en tae dae a lot o' things. He wull empty a' th' insane asylums, an' a' th' institutions for th' feeble minded, an' tak' a' th' folk wha are anly children in their mental ability an' mak' them brilliant students o' science, an' keep a' th' auld people frae growin' auld, an' mak' a' th' bairns smart in their lessons, an' gi' us a' poower like oor auld frien' Goliath.

We'll hae a' th' asylums for hotels an' boardin' hooses an' places tae entertain oor frien's an' a' th' institutions can be turned intil factories tae mak' story books, an' wheelbarrows or some sic thing. We'll nae require mony scuil maums, for oor bairns wull a' be sae smart the'll nae need much teachin' an' we'll a' hae min's the' like o' which ye've ne'er heard o' afore.

He's ga'en tae dae a' these wonders by feedin' us sheeps glan's or some sic thing. Mon! bit want that be a grund thing for th' fairmer wha raises sheep, except that it wull nae provide a market for th' wool? Ye ken wi' nae woolly min's in th' country we micht nae hae ony use for woolly claes an' besides oor lassies are nae wearin' flannel th' noo (not that we can notice ony way), an' we hae even pöliticians wha are gettin' alang wi'oot flannel next tae their skin. Ah think ah'll hae tae hae a cöversation wi' this maun an' find oot if it widna be better tae hae th' folk wear flannel whiles their tak'in' th' medicine. Ye ken, it wid be better for th' fair-

mer. O' course we hae a lot o' wolves th' noo wha are paradin' in sheep's clothin'. They think it gie's them mair poower an' pep. But that's nae enough wool tae help the fairmer.

Weel, ah'm wonderin' like, why some o' we chaps didna think o' this thing afore. Its sic a wonderfu' scheme. Just a few dröps o' sheep's glan's or some sic thing an' lo an' behold, presto change, moocha poocha, an' we're instantly changed. (Nae, nae, ah'm ahead o' ma story.) Instantly widna do, we hae tae buy th' medicine for months an' months, then, if we're nae a hard case, we become smart people, wi' th' wisdom o' oor auld frien' Solomon.

Weel, there's only wan thing th' matter wi' this quack döctor, an' his wonderfu' scientific discovery. First, he's nae a döctor at a', an' it's nae a scientific discovery, an' he's been in jail, an' he's nae got a post office address th' noo, an' last bit not least, oor Uncle Sam dosna like him verra weel. Ye ken, Uncle Sam dosna like ony body wha tells lies in a letter an' tries tae get money oot o' people they dinna ken, or promise them something they canna gi', or tae promise tae gi' them something they haena got. That's what they ca' usin' the mails tae defraud, an' Uncle Sam wull nae stan' for it. Uncle Sam is usually a fine auld cultivated gentleman o' th' auld scuil, but when he gets his dander oop wi' some one wha's foolin' th' public, an' usin' his post office tae do it wi',—Weel, he just sends them doon tae ane o' his boardin' hooses for a while an' that's what happened tae this maun.

Of course ah's nae sae anxious aboot oor feeble minded or oor morons. We hae a lot o' honest Döctors wha are workin' wi' these people, an' doin' a graund work. An we'er nae sae anxious aboot oor bairns wha are nae doin' weel at scuil. A lot o' guid milk an' porridge wull tak' fine care o' them, but mon! if some maun wid come along th' road wi' a scheme tae mak' o'er oor pöliticians an' book agents, we would gi' him a life's job, at guid wages.

There's a lot o' things we hae a maun of this kin' do. We wid like fine tae hae him mak' over a' oor pöliticians' min's sae they wid hae a min' o' their ain, ance an' awhile. We wid like, too, if he wid mak' over th' features o' some o' them. Ye ken th' chief öbject o' some o' oor pöliticians is tae hae their pictures pit intil th' mornin' papers, an' we wid like tae hae guid lookin' anes. The democrats ye ken are verra prood o' their appearance. When we gi' a welcom' tae a delegation o' ladies, we wid like tae hae a guid lookin' maun tae gi' th' talk an' sit aside o' them when ther haein' their photograph maun snap his kodak.

We wid be sure tae send him doon tae Chicago this June. He wid hae an a'fu' lot o' work then. He wid hae tae work nicht an' day. Perhaps some nicht he micht fin' a dark horse tae lead oor political parties oot o' their depression an' mak' th' country eternally indebted and gratified tae him.

Ah weel. There's a lot mair people we wid hae made over if we could, like those wha hang roon' oor cooncil chambers an' legislative ha's, but as lang as this maun's scheme is a fraud, an' naething o' this kin' is a success, we maun get along just as we are, an' mak' the best o' it, bit min' ye, ah'm tellin' ye, feed th' bairns plenty o' porridge an' vote for a' guid he men. Aye, an' dinna forget oor Wm. Cullen Bryant—wha tauld us tae "so live that when thy summons comes tae join the innumerable caravan that moves tae that mysterious realm where each shall tak' his chamber in th' silent ha's o' death, thou gae not as the quarrie slave, scourged tae his dungeon, bit, renewed and strengthened by an' unfaltering trust, approach thy grave as one who wraps his plaidie aboot him, an's lies doon tae pleasant dreams.

Ah weel, Guid Nicht.

—WEELUM.

HEALTH IN HEAT WAVES

In summer when the days are warm
Your habits, Sinner, need reform.
'Tis best to bow before the storm.

Consult the pundits of the press;
Be guided by their views—unless
You wish to suffer much distress.

Do you desire to drink? Then first
Of all restrain that lust accurst,
For drinking but increases thirst.

Do you desire to eat? Refrain,
For eating throws a hideous strain
Upon the liver, heart, and brain.

Would you recline upon your bed?
Oh! pause and stay awake instead,
For slumber is a thing to dread.

Do you desire to stay at home
And read some sage and tranquil tome?
Then stir yourself; get out and roam.

But do not walk with hasty stride,
And do not run and do not ride,
For exercise is suicide.

Do you perspire? How very sad;
It is not good for you, my lad,
You don't perspire? Dear me, that's bad!

Do you like walking? Learn to swim.
Are you a swimmer? Change your whim,
And walk to keep yourself in trim.

In short, the Heat Wave Rule for you
Is—Anything you want to do
Is bad and ought to be taboo.

Ponder this rule and walk with fear,
And, when you've got the whole thing clear,
Doubtless the winter will be here.

Its presence you need not deplore;
These maxims you may then ignore
And carry on as heretofore.

Manchester Guardian.

DUCTLESS GLANDS AS THEY APPERTAIN TO EYE DISEASES AND TO SURGERY

As conclusions to his article, A. D. Ruedemann, Cleveland, enumerates the following noteworthy facts: 1. Frequently it is found that patients who are examined for glasses have a muscle imbalance which may be due to hypothyroidism or other glandular dysfunction. 2. Hyperthyroidism produces definite eye changes, which in most cases are benefited by surgery; namely, wide fissures, ulcers and exophthalmos. Associated muscle changes are little benefited by any treatment, medical or surgical. 3. In parathyroid tetany, lens changes are sometimes present, probably the result of a combination of spasm with a deficiency of calcium and phosphorus. 4. Dysfunction of the pituitary gland is a causative factor in certain retinal disturbances and is an associated factor in other eye changes probably of polyglandular origin. 5. The recent work of Dr. Chile also brings out a group of cases in which suprarenal dysfunction is associated with eye changes. —*Journal A. M. A.*

MEDICAL ECONOMICS

CAN WE AFFORD STATE MEDICINE?

J. G. R. MANWARING, M.D.
FLINT, MICHIGAN

PART V

MEDICINE AND BUSINESS

"Put baldly, the view is that business is something outside of morality, a department of life in which the ordinary rules of morality have no validity."—Clay-Agger, *Economics*, page 639.

"It seems inherent in human nature that wherever the God is Gold, the Devil is the metallurgist. The symbol of our God is the dollar sign, and a bank account is the proof that our prayers have been answered. Wealth can commit no wrong and a rich life is measured in riches. The real sin is poverty, the height of folly is work. The one word 'success' sums up the rite, ritual and creed of the national religion."—Dorsey, *Man's Own Show, Civilization*, page 852.

Last fall at a meeting in New York City, the President of our largest surgical society advocated that physicians should adopt certain business practices such as some methods of advertising and practicing by groups after the manner of business.

Last winter a former advocate of State Medicine stood up in a Chicago meeting and advocated that the practice of medicine be reorganized along the lines of big business even to the point of having business men do the reorganizing if necessary.

Scheffel states that the public wants corporate medicine and advises physicians to give it to them.¹

Apparently this plan appeals to many men, including some physicians, and it is put forward as a substitute for state medicine or possibly to ward it off.

Those who are dissatisfied with the present practice of medicine ridicule medical ethics and practices and laud business methods as much superior. Now is a good time to review the ethics and practices of business before we think of accepting them for our own.

The business treatment of workers has been a long history of exploitation and oppression. This mistreatment dates from the time of slavery in those countries emerging from savagery, through the stage of serfdom to peonage by means of contract labor still common in backward places, and it prevailed right up into the "machine age," which early only intensified the wretchedness thrust upon employees. Their condition has been ameliorated a great deal by the influence of organized labor, with its exposés and reform laws.

We recall the English miners with their hovels, filth, ignorance and their child workers living underground and described as mere animals. A similar scandalous condition was found in English mills and in many of our own mills situated in the Atlantic States. Peonage by means of contracts and well regulated debts to company stores was developed in our own country in small towns with large mines. We recall the unrestricted importation

of cheap foreign laborers for the sake of reducing to a lower level the minimum wage and this irrespective of what evils such laborers brought to this country.

We recall the terrible toll of industrial accidents with the unnecessary maiming and killing of many thousands, also the constant legal fights to save the industries from paying more than they absolutely had to when caused to bear the burden of their injured. After this burden was placed upon industry by compensation laws, how quickly it reduced the *cost* of injuries by safety measures in order to save money rather than primarily to save men! And now we are reminded that today surgical care for injured employees is apt to be obtained more according to its cheapness than its quality.

We recall the fighting of all efforts of labor to organize and put itself in a position to deal more nearly on an equal footing with employers. This fight is perennial.

We also recall the tyranny of labor unions. The limitation of apprentices, the limitation of output to a maximum regardless of productive ability, the multitude of exacting and often apparently unreasonable rules, and always the demand for the maximum wage which was regulated by the effectiveness of force rather than by a careful analysis of conditions. We recall the frequent resort to violence with destruction of property and life. Terrorism has been a frequent weapon in labor's hands. Labor occupies a poorer strategic position and hence has not been so efficient in its control as management.

Business has not always been kind to customers. There is a principle in law that says the buyer must look out for himself. If he makes a bad bargain he must abide by it: (Caveat Emptor—let the buyer beware.) This opens the way for all kinds of sharp practices. We only have to note the untruthful advertising so prevalent everywhere. It ranges from mere exaggeration to downright lying. Testimonials are much used which may be faked, frequently are bought and usually have no merit at all.² The medical field has been a very fertile field for this kind of advertising, with fake cancer cures, worthless medicines, and medicines sold at exorbitant prices regardless of worth. The exploitation of the incurables by exchanging false hopes for good money has been a very lucrative business, despicable as it is. Business winks at it and only organized medicine has fought it constantly. Our pure food laws generally were opposed by business and our national pure food and drug act was likewise opposed and later weakened by modifications after being put into operation. Milk producers fought sanitary regulations which were put over in spite of them and have saved thousands of lives. Only a few months ago many dairymen of Iowa so objected to having their cattle tested for tuberculosis that troops had to be used to guard the testers. They apparently did not consider the children that infected milk might maim or destroy. Only a few years ago a number of packing houses sold regularly diseased meats and objected to inspection and regulation. Public eating places have had to be inspected and controlled to insure ordinary cleanliness. Business generally sells without regard to any other factors than safeguarding the payments for its wares. It has developed "high pressure" methods of selling regardless of needs or wants and, in our late orgy, beyond the ability of buyers to pay all for which they contracted.

Business persistently tries to embarrass competitors by underselling and ruining, by buying another's source of supplies, by buying up chattel mortgages and foreclosing to put others out of the way. If some concern needs a piece of property for ex-

pansion it is considered good business for a rival or his agent to buy it and refuse to sell it or to sell only at an outrageous price.

The history of our panics and of Wall Street activities is one long recital of unbridled greed and the incidental ruining of thousands of men.³ Stock market squeezes which take advantage of someone's precarious needs are clever and approved methods of hurting others for personal gain.⁴

Business also takes advantage of the fact that it handles other people's money so that trusting stockholders, with whose money a business is started or built up, lose what should be theirs through manipulation of several companies, mergers, freeze-outs, fancy salaries to officers and recently through bonus systems carried out in a legal manner to the end that millions of dollars which belong to the stockholders, the employers, or the customers have been diverted to a relatively few officials.⁵

The relationship of business to the public generally is such as to give rise to an old saying that a corporation is without a soul. Most business men have little regard for the ethics of the professions. As a matter of fact, they seldom know what these ethics are, but usually condemn them for practices which have crept in in spite of ethical standards. Only too frequently these are borrowed from business, such as secret commissions in medicine.

Business objects to the passing and enforcement of laws regulating it. It resents all restrictions placed upon itself. It condemns any criticism expressed by outsiders, even when given by those who are well informed. The invention of the steam engine, electric dynamos and motors, the turbine water wheel and the gas engine gave us the foundation for this great industrial age. These inventions and the great development of industries rest directly on investigations and discoveries by scientific experts; yet in general business men mistrust the scientist and do not approve of him excepting those whom they have to employ in their own business. It seems to be one of the faults of our times that the scientific expert is largely discounted.

Business supports candidates for office because friendly to its interests and not particularly because of integrity or merit.

Business is very cocky about its abilities and invades other fields with confidence such as economics, philosophy, government, etc.

Business is very complacent toward fraudulent cults and shortcuts to caring for the sick where, if ever, ignorance should have no place.

Business has obtained by chicanery or worse, public properties like natural resources and enriched itself at the expense of the public. Michigan should well remember the timber stealing of its lumber days. Oil and minerals in public property are not safe.

In pioneering generally peonage and slavery were always forced on the natives found. It is to the glory of our American Indian that he could not be successfully enslaved. Many New England fortunes were founded on a substitute from Africa. The history of this traffic is a terrible example of what greed will stoop to and also a proof that money cannot be tainted.⁶

When the public is in deep trouble, such as happens in time of war, business takes advantage of the hurry and needs of the country to indulge in a most unholy profiteering. It has happened to us in every war from the wooden guns of the Revolution to the more recent times when we were sold decayed canned meats, shoddy uniforms, paper soled shoes, and, probably worst of all, tremendous amounts of unnecessary supplies.

Only recently the courts discharged a man who

gave a bribe—he was a business man—and sent to prison the man (Fall) who received it; he was a public official and expected to be honest.

If you are successful in your business ventures you are all right and a desirable member of society. Few questions are asked as to how the riches were obtained.

Business habitually buys its way with secret commissions. This seems to be a natural concomitant of spending some other person's money for them. Purchasing agents are prone to accept commissions. A great deal of "sales promotion" is done by agents who in one way or another discreetly pay commissions. It is a laudable shrewdness to do this in business but a crime when indulged in by physicians who "split fees."

Agents of all kinds are willing to pay a little something to another for his influence in helping to sell to a prospective buyer. And executives acting for their company sometimes so arrange it that they get a part of the purchase price the company pays for supplies.

Certain sayings typify business both big and little: "Caveat Emptor," "business is business," "we mean business," all mean the same and are employed alike by the attorney, the banker, the business man, the employer and the labor union official. "Economic necessity," "absolute economic law," mean that "business is business." "Possession is nine points of the law" means that "might is right" and accounts for the fact that we have America and that Japan has Manchuria.

These charges could be multiplied ad nauseam. When discussed with business men, they excuse them by saying that such acts are exceptional. They are selected and presented because they are not exceptional at all but give a very fair idea of the underlying ideals which actuate business. These are all legal practices and have nothing to do with illegal business like racketeering.

It all means that competition brings out the weaknesses there are in men as well as the good. It, too, illustrates the fact that we are really creatures of circumstances and cannot always direct our own efforts as we would like. Business men are a part of a gigantic system in which they are under constant pressure to make a good financial showing; all else is secondary and if they do not make money it means failure. The men themselves are just like all men, usually kind and considerate to those whom they know intimately, have ideals of a high type in other fields, often are ardent church supporters and attendants. As family men they are certainly as fine as any.

Business is impersonal and admits only property rights. Human rights have been forced on it through a long succession of regulatory laws which have changed it greatly for the better.

Self-preservation instincts are the foundations of business efforts. Once there was only jungle law. There was no sympathy, no kindness, no pity given to others than the immediate family. Might alone was right and everything was on a "business basis." As business left the primitive haunts of men it carried up with it its successful business ethics. From time to time ethical teachers arose to protest; such were Buddha, Confucius, and Jesus. So far as business goes, reform movements started by these leaders were polluted and perverted by the drive for possessions.

The most abject subjugation of human rights, but not the most cruel, is found in slavery, which grew out of the doctrine that might is right. As wealth accumulated, loot and plunder became the way to riches. Nearly all of our great explorers of a few hundred years ago were after wealth by looting.

"Come and get it" was the open suggestion of weak peoples. Private fortunes at this time were founded almost entirely on questionable and often heartless practices. Many of our best New England families were founded on wealth obtained in making rum and importing slaves, which they bought and sold.⁶

Jungle ethics reached their worst in Europe in medieval times. Since the Renaissance the ethics of business between man and man has improved immensely. This improvement is a matter of evolutionary changes which have accompanied the rise of popular government and the enforced recognition of human rights.

The Al Capones are throw-backs to medieval times when all were or tried to be similar and racketeering was the chosen way of life.

Regulation of labor conditions, compensation laws, pure food laws, sanitary regulations, meat inspection and regulation, interstate commerce regulations, restricted immigration laws, corporation laws and regulations, etc., have helped to improve conditions a great deal. Competition prevents such regulations coming from within. They have to be brought about by public demand and as times goes on are accepted more graciously by most business executives and are even welcomed by a few.

In international business relations it is still good statesmanship to cheat, to deceive, to plunder, to intimidate and even to kill and conquer as of old—when it pays.

We are rightly proud of our material advances in the past 5,000 years or so. They are of an order never experienced by man previously and this great advance in the comfort and satisfactions of life has been possible by two driving incentives without which we would still be in the animal state.

They are:

1. The competitive struggle to get ahead.
2. The obtaining of special rewards for special services.

These are the driving forces which are behind our rush of progress and hard business standards, yet we can hardly spare them.

Uncontrolled business is not good for us, but, with the evolving of regulatory laws, business practices have been greatly softened and as time goes on they will improve still more. A just and practicable law in time naturally comes to be accepted as a moral obligation and in business much of the injustice and harshness will disappear.

The comparatively recent phenomenal development of immense factory systems, great traffic facilities, mass production, accumulation of wealth, introduction of labor saving devices, facilities for entertainment, etc., which have so spectacularly revolutionized social conditions in the past century, has convinced the big business man that he has found the touchstone of sure success and he would apply his methods to all other endeavors. And the professions, viewing this development with open-eyed awe, have been tempted to try tentatively similar methods. We are advised to put government on a business basis, introduce more business into medicine, and even the fine arts are feeling this pressure of commercialism.

After all it is the long run that counts and business has yet to justify its supposedly superior methods.

The art of medicine, always dealing with intimate human troubles, has not developed so profound a regard for property values. It was founded on magic and superstition, indulged in fraud both consciously and unconsciously and was given to as mercenary methods as business was for many centuries. A few heroic figures rose above the rank and file but never controlled the latter's bad habits to any great degree.

With the rise of the sciences in the past two or three centuries the whole foundation of the art of medicine has been rebuilt on discovered truth which has killed the magic and superstition and with it the practices such traits engender.

With this change has gone a modification of the ethics of practice which are more and more suited to sick people and only secondarily are they influenced by business methods. Under the pressure of modern haste and example the practice of medicine has picked up some questionable business ways but fortunately so far they have not been made a part of its code of ethics and are not indulged in by the majority.

This review would seem to show that the *evolution of business while wonderful indeed has not progressed to that point where the sick and injured can afford to let themselves become grist for "big business" any more than they can afford to become subjects for the red tape and impersonal attention of state medicine. When the time comes that corporations become possessed of a soul and come to value human welfare and human lives above money, then and then only will it be safe for the public to let corporate medicine take care of those who are ill!*

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3. Colman, Chas. A.: Our Mysterious Panics.
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COMMUNICATIONS

Petoskey, Michigan.
June 2, 1932.

Dr. F. C. Warnshuis.

Your letter with enclosure at hand regarding the Chicago doctor, and I will say that your reply to his letter was absolutely in accordance with the ideas of the members of the Northern Medical Society. To be able to make such a ruling stick would be the answer to our very earnest prayers.

I am glad that someone in authority has had the intestinal fortitude to stick up for us up here in the resort region. Let me assure you that we appreciate it very much. I shall bring the matter up at the next monthly meeting of our society and no doubt a resolution will be passed which will be mailed to the secretary of the State Board of Registration.

With kindest personal regards,

B. H. VANLEUVEN, M.D.,
Councilor, 13th District.

TREATMENT OF PERNICIOUS ANEMIA WITH HORSE LIVER EXTRACT: PRELIMINARY REPORT

Oscar Richter, Arthur E. Meyer and Andrew C. Ivy, Chicago, have prepared an extract of horse liver which is low in total solids (1.8 Gm. from 100 Gm. of raw liver) and of which an oral administration induces a complete remission in pernicious anemia. A preliminary study of the comparative concentration or potency of the antianemia principle or principles active in pernicious anemia present in horse and cattle liver suggests that the concentration may be greater in the liver of the horse.—*Journal A. M. A.*

GENERAL NEWS AND ANNOUNCEMENTS

Note the advertisements in this issue. Write for samples and literature.

Dr. and Mrs. Harrison S. Collisi and daughters, Jane and Barbara, sailed from New York for Europe on Tuesday, June 28.

Dr. Clark D. Brooks read a paper before The Toledo Academy of Medicine, Friday, May 27th, on Surgical Diseases of the Biliary Tract.

Note the dates for our annual meeting: Kalamazoo, September 13, 14 and 15. The House of Delegates convenes on Tuesday, September 13.

Honorary degrees were conferred on Dr. Hugo Erichsen, Dr. Charles G. Jennings and Mr. Malcolm Bingay at the annual commencement of the Detroit City College.

Mr. William J. Burns, LL.B., executive secretary of the Wayne County Medical Society, spoke before a joint meeting of the physicians and dentists of Akron, Ohio, on June 14.

Dr. W. T. Dodge, Big Rapids, retired from active practice, extends greetings to his professional friends. Physical infirmities confine him more or less to his home. He would be pleased to hear from his many friends.

Dr. G. Carl Huber, Professor of Anatomy and Dean of the graduate school of the University of Michigan, was honored by his students, friends and colleagues when a portrait in oil of himself was presented to the University.

On June 22 there was a joint meeting of the Washtenaw and Oakland County Medical Societies at Orchard Lake Country Club. The afternoon was spent at golf. Following the tournament dinner was served at the club house. Following the awarding of prizes Dr. Stevens, Headmaster of the Cranbrook School, spoke on "The Battle of Jutland."

The American Board of Ophthalmic Examinations will hold an examination in Montreal on Monday September 19, 1932. Necessary applications for this examination can be procured from the Secretary, Dr. William H. Wilder, 122 South Michigan Avenue, Chicago, Illinois, and should be sent to him at least sixty days before the date of the examination.

Dr. Walter R. Parker, for twenty-seven years Professor of Ophthalmology of the University of Michigan Medical School, has retired and is to be succeeded by Dr. George Slocum who was for many years his assistant. The event of Dr. Parker's retirement was marked by a dinner in his honor tendered by his friends and colleagues on May 24.

Dr. H. R. Casgrain of Windsor, Ontario, died very suddenly at his home on June 16. Dr. or Col. Casgrain was a picturesque figure in medicine, well known to the older men in the medical profession of Wayne County. He was a graduate of the Detroit College of Medicine of the Class of 1879. Col.

Casgrain had rendered distinguished service in the World War, being stationed on the Island of Lemnos in the eastern Mediterranean Sea. He was borne to his grave on a gun carriage with full military honors.

The Alumni Clinics of the Detroit College of Medicine and Surgery were held June 15, 1932, when the following program was the order of the day at the Receiving Hospital: Cardio-Vascular Disease, Dr. R. L. Novy; Ward Rounds on Medicine, Drs. R. L. Novy, R. M. McKean, E. D. Spaulding, Douglas Donald, and S. G. Meyers; General Surgery, Dr. H. K. Shawan; Eye, Ear, Nose and Throat Surgery, Dr. J. M. Robb; Gynecological Surgery, Dr. H. W. Yates; Treatment of Heart Disease, Dr. F. N. Wilson; Clinical Pathological Conference, Dr. O. A. Brines; Electro-Cardiography, Dr. Walter Wilson; Tumors of Uterus and Mammary Gland; Kidney Pathology, James E. Davis. An Alumni dinner was held in the evening at the Book-Cadillac Hotel.

GOVERNOR BRUCKER ADDRESSED THE WAYNE COUNTY MEDICAL SOCIETY

On the evening of May 24th the Wayne County Medical Society had as their guest the Governor of the State. Following a dinner served at the Wayne County Medical Society club rooms, the meeting adjourned to the auditorium of the Maccabees Building, where the Governor addressed a capacity audience on the subject of State Affairs. Among other things the Governor commended the work of the legislature, inasmuch as they had limited themselves to only necessary legislation comprising some forty-two bills and that a concerted effort was made not only in the way of balancing the budget, but in reducing the cost of government to the minimum by, among other things, a reduction all around in salaries which had been effected very graciously by those affected.

Governor Brucker referred to the Lindbergh kidnapping and reaffirmed his stand on capital punishment as a means of disposing of first degree murderers. This statement brought applause, apparently the approval of the audience.

The officers of the Northern Tri-State Medical Association were guests at dinner of Dr. William Donald, Professor of Medicine in the Detroit College of Medicine and Surgery, June 6, 1932, at the Detroit Boat Club. The purpose of the meeting was to further the program and select speakers for the meeting in LaPorte, Indiana, the second Tuesday in April, 1933. Dr. J. Milton Robb, President of the Michigan State Medical Society for 1933, was an invited and honored guest. Speakers who have already been placed on the program are as follows: Dr. Henry A. Christian of Boston, Professor of Medicine in Harvard University; Dr. Russell M. Wilder, Professor of Medicine in Chicago University; Dr. Charles A. Elliott, Professor of Medicine in Northwestern University; Dr. Chas. Lukens of Toledo, Ohio, Past President of the Ohio State Medical Association; Dr. Frederick Collier, Professor of Surgery in the University of Michigan; Dr. Reed M. Nesbit, Professor of G. U. Surgery in the University of Michigan, and Dr. Leonard F. C. Wendt, of Detroit. About six more speakers will be added. The morning program will be given over to Clinics. The following officers who were present were: Dr. Edward B. Pedlow, President, Lima, Ohio; Dr. G. O. Larson, Vice-President, LaPorte, Ind.; Dr. Edward P. Gillette, Secretary, Toledo, Ohio; Dr. H. F. Randall, Treasurer, Flint, Michigan. Counsellors: Dr. Charles Lukens, Toledo, Ohio; Dr. Norris Gillette, Toledo, Ohio; and Dr. Jos. Andrius, Detroit, Mich.

OBITUARY

DR. LOUIS BARTH

Louis Barth, Grand Rapids, died at Blodgett Hospital on June 9th from heart disease complicating diabetes. Dr. Barth had been in active practice for some fifty years. He was a member of the Kent County Medical Society.

DR. HARRY BAUGUESS

Dr. Harry Bauguess died at his home on Mary Grove Avenue, Detroit, June 3rd, after an illness of two months. He was born in Illinois fifty-seven years ago. Dr. Bauguess received his medical education at the University of Nebraska, where he was graduated M.D. in 1899. He later returned to his alma mater, where he received the degree of B.S. in 1920 and B.A. in 1921. He was a student at the University of Minnesota under the Mayo Foundation from 1922 to 1924 pursuing work in pediatrics. He had also pursued post-graduate work in pediatrics in the University of Vienna. In 1924 he came to Detroit, where he was engaged in general practice with an office on Grand River Avenue until his last illness. He was a member of the Wayne County Medical Society, Michigan State Medical Society and American Medical Association. He is survived by his widow, Mrs. Ethel Bauguess, who is a member of the faculty of the Highland Park Intermediate School.

DR. CHARLES SUMNER MORLEY

Dr. Charles S. Morley died at his home in Holly on May 27 after an illness of one week.

He was born at Victor, Oswego County, New York, on January 18, 1855, the son of Rev. Butler Morley, a celebrated Baptist preacher. He began the study of medicine at the age of sixteen with Dr. Lyman Clary at Syracuse, New York, followed by instruction at the Cleveland Homeopathic Hospital College. He completed the course but did not receive his degree because of his minority. He began the practice of medicine at Vernon, Michigan, in 1874. In 1876, having reached his majority, he obtained his medical degree from the Cleveland Homeopathic Hospital College. In June, 1876, he removed to Pontiac, where he became associated in practice with Dr. Amos Walker.

He served as city physician of Pontiac for ten years. In 1887 he sold his practice to Dr. Aaron B. Avery and located at Richmond, Virginia, for a short time. He returned to Detroit the same year, continuing in practice there until 1924, when he returned to Oakland County. For many years he served on the surgical staff of Grace Hospital, Detroit, and other hospitals in that city. He was at one time a member of the Wayne County Medical Society, Michigan State Medical Society and the American Medical Association. He had been living at Holly for the past eight years.

DR. C. A. STEWART

Dr. Colin A. Stewart of Bay City, Michigan, died very suddenly in his office at the age of fifty-five years. The cause of death was pronounced heart disease. Dr. Stewart was born at Belmont, Ontario. He graduated from the high school in St. Thomas in 1896 and after teaching school for a year he entered the Detroit College of Medicine, where he was graduated M.D. in 1901. After a year's internship in Harper Hospital he located in Bay City, where he practised up to the time of his

death. Dr. Stewart was active in the interests of the Bay County Medical Society. In 1904 he married Miss Gertrude Baicher of Bay City, who survives him. He is also survived by a daughter, Mrs. Elaine G. Schultz, and a son, Colin R., both of Bay City.

DR. LEONARD F. C. WENDT

Dr. Leonard Wendt of Detroit died suddenly of heart disease. Dr. Wendt had suffered from coronary thrombosis, but after a few months' rest had been able to resume his practice for the past six months. He was born in Detroit fifty-six years ago. In 1902 he graduated from the old Detroit Homeopathic College. Dr. Wendt had been a member of the staff of Grace Hospital, Detroit, since his graduation. For a number of years he had emphasized diabetes and its treatment and had written extensively on the subject. He was a member of the Wayne County, Michigan State, and American Medical Associations. Dr. Wendt is survived by his wife, Mrs. Edith Reed Wendt, one brother and four sisters.

DR. JAMES E. ORR

Dr. James E. Orr, who for nearly twenty-five years practiced medicine in Detroit, died at his home June 14. He had been in ill health for two years as a result of an automobile accident. He was born in Wales, Michigan, seventy-five years ago and moved with his parents to Tilsonburg, Ontario, as a boy. He attended McGill University in Montreal and for a time taught there. In 1888 he was graduated in medicine from that University. Following his graduation he came to Detroit to practice medicine. He retired from active practice nearly twenty years ago. In 1894 he married Christiana Chuka, who died in 1923. One son, James Edgar Orr, with whom he lived, survives.

DR. H. D. ROBINSON

Dr. Humphrey D. Robinson, dean of the Manistee County Medical Society, died very suddenly at the age of 74 years, without any warning, at 8 A. M., on May 14th. Dr. Robinson was of the rapidly passing school of general practitioners and had served the people of Manistee since 1894. He was a graduate of the Detroit College of Medicine and Surgery on the unusual date of Feb. 29, 1884. He immediately began practice in the village of Free Soil, Mason County, Michigan, in July of 1884 and continued there for 10 years, moving to Manistee in 1894. He was Acting Assistant Surgeon for the U. S. Public Health Service at Manistee for a period of seventeen years, being retired four years ago. He was a member of the Masons, Knights Templar, and Knights of Pythias. He represented the Manistee County Medical Society as a delegate for a considerable period of years and will be remembered by a great many of the older practitioners throughout the state.

ANNUAL MEETING

KALAMAZOO

SEPTEMBER 13-14-15, 1932

An Unusual Scientific Program

SOCIETY ACTIVITY

THE MONTH'S COMMENT

The August Journal will be the Kalamazoo number. Watch for it. The annual meeting dates are September 13, 14 and 15. Note them on your engagement calendar.

Read the report of our A. M. A. delegates published in this issue. Every member should become a Fellow of the A. M. A. and so not only secure the Journal of the A. M. A. but also support the work that is being done for you by our national association. We would be in sore straits were it not for these national activities.

Public Relations Committees of County Societies are urged to be prompt in answering communications from the Committee on Survey of Medical Practice and Health Agencies. Every coöperation should be accorded.

The names of 237 were removed from the mailing list for failure to pay 1931 and 1932 dues. The names of those in arrears for 1932 dues will be removed July 1. See your county secretary and if short of funds he will arrange for deferred payment. One malpractice suit will cost you more than a lifetime of dues. Threats and suits are increasing in number and you may be the next defendant. Maintain your membership.

Advertisers make your Journal possible. Patronize them and give preference to those who utilize space in your Journal. Peruse each issue and respond by sending in requests for literature or samples. Let our advertisers know you appreciate their support.

Should you be threatened with a suit or suit be started *do not engage a local attorney*. Advise Medico-legal Committee promptly, withhold all comment and be guided by instructions that will be sent. The Society has a corps of experienced attorneys that are engaged for your defense.

This office welcomes your inquiries and is at your service. We invite you to call upon us whenever we can be of assistance or impart information.

Members of the medical profession who are interested in Roentgenology are invited to an exhibit to be held on July 12th at 8:15 P. M. at the Grace Hospital Auditorium, Detroit, to view the results of an intensive study of chest radiography which has been carried on at the Iola Sanitarium, Rochester, New York, by the General Electric Company.

DELEGATES REPORT

Michigan's delegates to the New Orleans A. M. A. annual meeting submit their report. Obviously they are unable to go into details on the wide field of work that our national organization is engaged in. Members are urged to read the annual reports as published in the *Journal of the A. M. A.*

THE HOUSE OF DELEGATES, MICHIGAN STATE MEDICAL SOCIETY

Your society was represented at the New Orleans Session by Delegates J. D. Brook, C. S. Gorsline, H. A. Luce, Carl F. Moll and Louis J. Hirschman.

The meeting place was the Tip Top Inn of the Hotel Roosevelt, which hotel was the headquarters for the officers and delegates. The arrangements for the meeting of the House of Delegates were very satisfactory and helped in some way to mitigate the warm and humid atmosphere of New Orleans.

The first order of business was the address of the Speaker of the House, our own Fredrick C. Warnshuis, who presided in his usual efficient and satisfactory manner. Several recommendations were made to facilitate the work of the House of Delegates and due deference was paid to the memory of Delegates J. O. Polak of New York, E. C. Thrash of Georgia, Donald McRae of Iowa, David Ross of Indiana and A. W. Hornbogen of Michigan, who had died during the past year.

The President, E. Starr Judd, stressed the responsibility of the members of the House of Delegates toward some of the civic and social functions for members of the medical profession. He stressed particularly the problem of personal service and advised a further study of the present conditions of medical practice in other countries, as was also recommended by resolution by our own state society. Contract practice was particularly dwelt upon and the tendency of the corporations to practise medicine was criticized. The practice of turning over portions of the practice of medicine to nurses, midwives and technicians was also criticized by Dr. Judd. He bespoke a better coöperation between the medical profession and those engaged in public health work.

He also discussed graduate training and the study of specialization in medicine and advised further investigation into qualification as to those holding themselves out as specialists.

He commended the work being done by the profession to secure the hospitalization of veterans in local private hospitals rather than the project being pushed by various veterans' organizations which would involve the expenditure of millions of dollars of money in the construction of special government hospitals for the care of veterans.

The address of President-elect Edward H. Cary covered many of the same points and he particularly commended the excellence of the various publications sponsored by the American Medical Association. Both speakers stressed the importance of more adequate housing for the activities of the A. M. A.

BOARD OF TRUSTEES

Considerable time was devoted to the reports of officers and Board of Trustees, the report of the secretary clarifying the differentiation between the Fellows and Members which seemed to be still somewhat hazy in the minds of some of the Fellows of the Association. He deprecated the so-called membership drives sponsored by some of the constituent state and county organizations, feeling that there was danger in the enthusiasm over increasing the membership of including undesirable practitioners of medicine. He also brought out situations exist-

ing in some states, as in the northern peninsula of our own state, of dual membership. He stated that there were men living in one state near the boundary line and practising in the other, who had memberships in county and state societies of both. It was felt that a member who chose to affiliate with a society other than that of his state of residence should secure a waiver from his own state society before becoming a member of the society of another state.

In the report of the Board of Trustees, it was brought out that the A. M. A. now has assumed the complete responsibility of publishing the Quarterly Cumulative Index Medicus. Also that the Bureau of Permanent Exhibits had expanded so rapidly that more space was necessary in the headquarters building to house this and other activities. The shrinkage in the securities owned by the Association in its reserve fund was considerable, but owing to unusually good selection of securities, the shrinkage was less than the average shrinkage in the portfolios of other similar organizations.

The report brought out the fact that there were nearly five million copies of the Journal printed in 1931 with an average weekly circulation of ninety-five thousand copies. The amount of reading material published in the Journal would make the equivalent in one year of fourteen average books or one-half the size of the Encyclopedia Britannica. The report showed that the circulation of Hygeia was steadily increasing and this journal showed a profit for the year, as did the American Medical Directory.

The Council on Pharmacy and Chemistry reported to the board that they were again cautioning the profession against the indiscriminating use of intravenous therapy, feeling that some practitioners have been misled by the enthusiastic efforts of drug manufacturers to popularize intravenous therapy. This Council, as well as the Council on Physiotherapy, is working unceasingly to separate the wheat from the chaff and the results of their labors are always at the service of the profession.

The Committee on Foods reported to the Board of Trustees that they passed on 331 food products of which 129 were accepted. They reported an increasingly sympathetic response from food manufacturers and a desire to cooperate with the work of the Council.

The Board reports that 205 five minute talks and 120 fifteen minute talks were given under association auspices over the radio during the past year. One hundred thirty-one thousand, five hundred fifty-nine pamphlets on health matters printed for non-medical readers were sold during the past year. The interest of the public in periodical health examination, health problems in education, health clubs for boys and girls were all further advanced during the past year. Cooperation with the congress of parents and teachers was also a part of the year's program.

The Board of Trustees report also disclosed that the Bureau of Investigation is still very active and the demand for pamphlets and posters on nostrums and quackeries showed a decided increase over 1930.

The Board also reported the work of the Bureau of Legal Medicine and Legislation with particular emphasis on the work opposing the Sheppard-Towner type of legislation and supporting legislation which would remove the restrictions imposed on physicians in the prescribing of liquor.

Bills involving World War Veterans' Relief, Animal Experimentation and nearly 3,000 bills of medical interest received the attention of this bureau.

ECONOMICS

The new Bureau on Medical Economics has reported an ambitious program of investigation of the various phases of the economical side of the practise

of medicine and, due in part to a resolution introduced by the Michigan Delegation, the Bureau will add more personnel to broaden the scope of its work during the coming year. A list of the following phases of economics will give an idea of the scope of this bureau:

- Capital investment in medicine.
- Care of the indigent sick.
- Collection methods and agencies.
- Contract practice.
- Costs of medical education—students' expenditures—complete cost.
- County and state dues.
- Dispensaries and clinics.
- Distribution of physicians.
- Distribution of medical facilities.
- Evaluation of patient's ability to pay.
- General insurance for physicians.
- General investments.
- Group practice.
- Health and accident insurance.
- Industrial medicine.
- Instruction in medical economics (college and extension courses).
- Malpractice insurance.
- Medical fees.
- Office plans.
- Office systems.
- Panel systems (of foreign countries).
- Physician's income.
- Sickness financing.
- Sickness insurance (compulsory and voluntary).
- Sickness savings.
- Sickness statistics.
- State, county and municipal health department activities.
- Thrift programs and workmen's compensation.

The Board has contacted with the American Bankers' Association and finds that member banks are authorized to encourage the public to open savings account to meet the costs of sickness similar to the Christmas savings account.

Other subjects taken up by the Board include the care of the injured and sick, and investigation into the accident and health claim proofs was suggested by the Michigan State Society and a further investigation of contract practice.

The Board reports that 32 awards were made during the past year for scientific research with a total amount of \$13,600.

The Board also reports the successful termination of the suit brought against the A. M. A. by Norman B. Baker of Muscatine, Iowa, and the Baker Institute for the Treatment of Cancer.

A resolution was introduced into the House of Delegates by J. D. Brook of Michigan recommending that the association study the problem of birth control. This was discussed at some length but no action by the Association was deemed advisable at the present time.

JUDICIAL COUNCIL

The report of the Judicial Council recited the tendency toward a radical change in the relations of physicians and medical societies towards the public as well as signs of change in the relations of physicians towards one another. As a result of the present economic crisis, many forces are pressing for the adoption of new methods of medical practice as well as for revolutionary changes in the very traditions of the profession with respect to the obligations and privileges of physicians in their contacts one with another. Some of these forces have been sadly misguided and will result in disaster to both medicine and public unless they are carefully guided.

For several years the Judicial Council has given exhaustive consideration to suggestions to the effect that the section of the Principles of Medical Ethics dealing with "Patents and Perquisites" should be changed to permit physicians to secure patents on the products of their inventive genius. After having given much careful thought to this matter, the Council sought the opinions of a relatively large number of representative physicians in various parts of the country. Responses received indicated an

overwhelming sentiment to the effect that there should be no change in the present provisions of the Principles of Medical Ethics with respect to patents.

The Council reported that there is some misunderstanding on the part of some officers of some societies concerning the word "Eligible" as applied to applicants for membership. The word as used in the constitution or by-laws of a medical society does not imply that the society is under any compulsion or obligation to elect an applicant to membership but simply means that the application of any reputable, registered physician shall be considered in the prescribed manner and the applicant elected or rejected as the vote of the members may indicate.

Similarly, there appears to be some misunderstanding concerning the significance of "transfer cards." No county society is compelled or obligated to accept into its own membership a "transfer" from another county society unless there is specific provision in its by-laws to that effect. A "transfer card" simply indicates that its holder is a member in good standing in some county society. Unless such a card is given validity as an authorization for admittance by express provision of the laws of the state association and the county society concerned, it has no weight whatever except as an evidence of the membership in another county society.

GROUP PRACTICE

An important supplementary report of the Judicial Council was presented to the Executive Session by Dr. George E. Follansbee, Chairman, as follows:

The privilege of healing the sick as a profession is a right granted only to those properly qualified and licensed by the state. It is a privilege belonging only to the medical profession. It is a sacrifice of professional dignity that this exclusive right of medicine is so often sold for individual gain or its possessor deprived of it against his will. In increasing numbers, physicians are disposing of their professional attainments to lay organizations under terms which permit a direct profit from the fees or salaries paid for their services to accrue to the lay bodies employing them. Such a procedure is absolutely destructive of that personal responsibility and relationship which is essential to the best interests of the patient.

Outstanding examples of this type of unearned gain are not difficult to find. There are insurance companies administering workmen's compensation benefits wherein the salaries or fees paid to the physician by the insurance company are so much below the legal fees on which the premium paid by the industry is based as to furnish a large direct profit to the insurance company. As mentioned in a former report of the Council, certain hospitals are forbidding their staffs of physicians to charge fees for their professional services to "house cases" but are themselves collecting such fees and absorbing them in the hospital income. Some universities, by employing full time hospital staffs and opening their doors to the general public, charging such fees for the professional care of the patients as to net the university no small profit, are in direct and unethical competition with the profession at large and their own graduates. They are making a direct profit by a practice of questionable legality, from the professional care. There are other examples which could be cited but those mentioned suffice.

The increasing number of such instances indicates either a thoughtlessness or a selfishness on the part of the participants that is disturbing to the Judicial Council and in its opinion warrants the Council in bringing the practice, with the disapproval, again to

the attention of the House of Delegates and through it to the profession at large.

VETERANS' LEGISLATION

Special consideration was given the report of the committee to contact the various Veterans' Associations and the results of their labors are summarized as follows by the committee:

First, our committee has established, through the Board of Trustees, a standing committee coöperating with the American Legion, The American Hospital Association and the Veterans' Administration to work out some change in policy in regard to the care of veterans.

Second, we have stimulated the medical legionnaires and the profession throughout the country to interest the local Legion posts in the dangers of federalized medicine from the standpoint of the veteran and the country.

Third, members of our committee have discussed veterans' legislation before the secretaries' conference and before the Annual Congress on Medical Education, Medical Licensure, and Hospitals.

Fourth, we have written and stimulated editorials and articles in the state medical journals on veterans' legislation. In this work Dr. Shoulders has been particularly active.

Fifth, every member of the committee has talked before groups of medical men and legionnaires, not only in their own but also in other states.

Sixth, by stimulating the establishment of a permanent committee in all states, representing the American Legion, American Hospital Association, Veterans' Administration and the American Medical Association, the machinery is gradually being built up for better mutual understanding and to prepare the way for any change in policy which may come in the future.

The committee was headed by C. B. Wright of Minnesota, and Angus McLean of Detroit, Michigan, was a member of the auxiliary committee.

LIBRARY

After an impassioned plea by Surgeon-General R. Patterson of the United States Army, the House of Delegates passed a resolution recommending that the Surgeon-General's Library be not located as part of the Congressional Library, but that it be housed in a fireproof building in the Army Medical Center in Washington, where it would be more accessible to the medical profession.

A resolution approving the standard classifying nomenclature of diseases was also passed.

An important resolution presented by the Reference Committee on Medical Education and passed unanimously was as follows:

Resolved, That it is the opinion of the House of Delegates of the American Medical Association that physicians on the staffs of hospitals approved for intern training by the Council on Medical Education and Hospitals should be limited to members in good standing of the American Medical Association, this ruling to apply to all hospitals except federal, state, county and municipal institutions.

Dr. Burt Shurly of Detroit, Section on Laryngology, Otology and Rhinology, introduced the following resolution which was adopted:

Whereas, The relief of economic chaos is dependent on the restoration of confidence and stability of thought among the American people in the place of hysteria, confusion and indecision;

Whereas, The Congress of the United States has in contemplation a return to the income tax in effect during the World War;

Whereas, The burden of earned income tax falls heavily as class legislation on the physician and surgeon who works day and night for the small fees he may be able to collect; be it

Resolved, That Congress be immediately advised of the injustice, inequality and the burden of this taxation on the medical profession in this time of depression and that they be requested to ponder, stop, look and listen to our appeal against injustice to the medical profession of America.

Various other resolutions were adopted. The call upon the A. M. A. to assist small hospitals to raise their standards, one protesting against the number of medical officers in the Army and one calling for closer coöperation between the County Medical Societies and the A. M. A.

Many matters, of course, were taken up by the House of Delegates, but the limitations of time do not permit their being recorded at this time and the members of the Michigan State Medical Society are respectfully referred to the full minutes in the issues of the Journal of May 21st and 28th respectively.

ELECTIONS

The election of officers by the House of Delegates resulted in the election of Dr. Dean D. Lewis of Baltimore as President-Elect. Dr. Rudolph Matas of New Orleans was elected Vice-President. The other officers were re-elected, Dr. Edward B. Heckel, Chairman of the Board of Trustees, having served two terms, was ineligible for re-election and Dr. A. W. Booth, of New York, was elected in his place. Dr. Rock Sleyster, of Milwaukee, was re-elected for a term of five years. F. C. Warnshuis was re-elected as Speaker.

Milwaukee was selected as the place for the 1933 Annual Session.

The Session was characterized by earnest application of all of the delegates, temperate discussion of the various subjects presented and intelligent and timely action on all matters which related to the betterment of the Practice of Medicine and the Profession at large.

The attendance of the Michigan Delegation present at all Sessions was 100 per cent.

Respectfully submitted,

The Michigan Delegation
By LOUIS J. HIRSCHMAN.

POST-GRADUATE CONFERENCE 11TH DISTRICT

One of the most successful and interesting Post-Graduate Conferences of the 11th Councillor District, State Medical Society, was held at the Western Hotel, Big Rapids, May 25, 1932.

The Mecosta County Medical Society sent out one hundred and seventy special invitations to the Medical men and Dentists in the following counties: Newaygo, Mason, Gratiot, Isabella, Clare, Muskegon, Oceana, Wexford, Kalkaska, Missaukee, Montcalm, Osceola and Mecosta. Every county society to whom invitations were sent was represented. The registration sheet showed sixty-nine present.

The program was as follows:

- 1:15 p. m. Opening Remarks, George L. LeFevre, M.D., Councillor.
- 1:25 p. m. "Diabetes," Wm. LeFevre, M.D., Muskegon.
- 2:00 p. m. "Therapy in Heart Lesion," B. R. Corbus, M.D., Grand Rapids.
- 2:30 p. m. "Prostatic Hypertrophy," W. J. Butler, M.D., Grand Rapids.
- 3:15 p. m. "Pneumonia," B. R. Corbus, M.D., Grand Rapids.
- 3:45 p. m. "Fractures," R. H. Denham, M.D., Grand Rapids.
- 4:15 p. m. "Gynecological Therapy," Alexander M. Campbell, M.D., Grand Rapids.
- 4:45 p. m. "Shoulder Joint Injuries," R. H. Denham, M.D., Grand Rapids.
- 6:00 p. m. Dinner, Western Hotel

7:00 p. m. "Social Trends in Medicine," F. C. Warnshuis, M.D., Grand Rapids.

The program was a varied and excellent one, the subjects practical and instructive, the speakers thoroughly familiar with their subjects, and the lantern slides shown elucidated and intensified the presentations.

The meeting was called to order by Dr. George LeFevre, Councillor of the 11th District, at 1:25 p. m., and was completed at 5:15 p. m. An excellent dinner was served by the Hotel at 6:00 p. m. At 7:00 p. m. Presiding Officer LeFevre addressed the members present on the frequency of malpractice suits, and urged all to discourage them. Dr. LeFevre quoted from the late Dr. Osler's address on the necessity for exercising caution in giving opinions that might incite patients to begin malpractice suits. At the conclusion of this, the chairman introduced the post-prandial speaker, Dr. F. C. Warnshuis, Secretary of the State Medical Society, who gave a very optimistic and well received opinion of the "Social Trend in Medicine." The speaker in his customary forceful manner, exhorted all medical men to be the leaders in the movement in their respective communities. At the conclusion of Dr. Warnshuis' address, the Chairman congratulated the Mecosta County Society on the excellent coöperation given him. In the absence of President MacIntyre, the Secretary of the Mecosta County Medical Society, Dr. John L. Burkart, was called on. He briefly referred to the spirit of fraternity which existed at the present, in the profession at large, and in Mecosta County in particular, and ventured the opinion that no time in his residence in Big Rapids and Mecosta County since 1881 has such harmony existed. Malpractice suits are unknown here. In conclusion he thanked the society for their generous assistance in making this meeting a success and suggested that the old maxim "Do unto others as you would have others do to you, what you are unwilling to receive be sure you never do," was the best preventative of malpractice suits.

Guests present were Major W. T. Dodge, honorary member, Dr. Frances Hennessey of the Couzens Foundation Unit; Miss May Bergey, County School Nurse; and Miss Lura Addie, City School Nurse.

JNO. C. BURKART, *Secretary*.

BIRTH CONTROL

Mrs. Morton Keeney,
President, Michigan League for Birth Control,
1222 Lake Drive, S. E.
Grand Rapids, Michigan.
My dear Mrs. Keeney:

At the last meeting of the Executive Committee of the Council of the Michigan State Medical Society, a communication from you was read, asking the endorsement by the Michigan State Medical Society of the work of the Michigan League for Birth Control. Let me apologize for the delay in answering.

The Council of the Michigan State Medical Society looks upon this matter as a controversial subject, and has not been willing, when the matter has previously been brought up, to take such action as would commit the Society to a definite policy. The Executive Committee, speaking for the Council by Authority, and for the profession as a whole, believes that, while technically the matter is a medical subject, it remains mainly in the domain of Sociology. We believe that there is something to be said on each side of the controversy. We know that there are members of our profession who look upon this movement as a definite social-economic problem, others who feel that it is a definitely personal matter, and still others who oppose the movement on

religious and moral grounds. Until there is a greater unanimity of opinion in the profession and in Society in general, we believe that the Michigan State Medical Society, as a unit of Organized Medicine, should not take the formal position of an advocate.

If and when Society agrees on the legitimacy and propriety of contraceptive measures, we believe it is for the physician to guide, control and safeguard the methods employed. The necessity for this we realize has been, to a considerable extent, recognized by the leaders of the Birth Control Movement.

We see no reason why individual members of the profession who are convinced of the wisdom of their course should not take an active part in the movement as individuals, but we do not believe that we are, at this time, ready to put the stamp of approval upon it.

We feel that it is not unlikely that the time is approaching when it will be incumbent upon Organized Medicine to take a stand on this question. What that stand will be depends somewhat upon the form of the activities of the Birth Control League.

If we look upon this movement as an experiment in Sociology, then the doctor is, by virtue of his professional contacts, in an unusual position to determine for himself whether the good that is to come out of this movement is to well over-balance the possible evils. Once convinced that the good predominates, he will have a great desire to have Organized Medicine further the project.

Very sincerely yours,

BURTON R. CORBUS,
Chairman of the Council.

COUNTY SOCIETIES

GRATIOT-ISABELLA-CLARE COUNTY

The April meeting of the Gratiot-Isabella-Clare County Medical Society was held in the Wright Hotel, Alma, Thursday, April 21. Sixteen members and five visitors had dinner together and four members came in after dinner.

The minutes of the previous meeting were read and approved.

President Burt then introduced Doctor Bruce H. Douglas, Supt. of the Maybury Sanatorium, Northville, Michigan. The subject of the Doctor's talk was "The Treatment of Pulmonary Tuberculosis," with special reference to Pneumothorax. Some of the points made by the Doctor were as follows:

Pneumothorax as a form of treatment was first recommended by an English physician named Carson in the year 1821. It was later recommended by an Italian physician. In 1898 J. B. Murphy and his associate Tice reported a series of cases treated by pneumothorax. It was not until 1912 that the X-ray was brought into use in connection with this treatment and that pneumothorax was more generally used. About 300 c.c. is injected the first time. The patient is then examined with the fluoroscope to decide when to repeat the injection. Two questions to decide at this time: the state of the lesion—is the cavity closed? Is the sputum negative? If the sputum which was positive is negative, we believe the case is improving. Air embolism is a possible accident. If it does occur, lower the patient's head until relieved. Pneumothorax may be used to check hemorrhage. Advisable to consider pneumothorax as a possible treatment in every case of pulmonary tuberculosis. Seventy-seven per cent of arrested cases have received some form of collapse therapy. In 1927, 8 per cent of patients discharged as arrested cases and 2.5 per cent died. In 1931,

34 per cent discharged as arrested and 10 per cent died. The Doctor showed a number of X-ray pictures to show the progress of cases and also answered many questions.

On behalf of the Society, President Burt thanked Doctor Douglas for his excellent presentation of this subject.

Meeting adjourned.

E. M. HIGHFIELD, M.D., *Secretary.*

MIDLAND COUNTY

The May meeting of the Midland County Medical Society was held at the Midland Country Club on Friday evening, May 13. The meeting was combined with that of the personnel of the County Health Departments of Genesee, Saginaw, Isabella and Midland counties. Six members of our society and the Health Commissioners and nurses of these units had dinner together.

The meeting was called to order by the president, Dr. C. V. High, Sr., and was immediately turned over to Dr. A. W. Newitt, Health Commissioner of Midland county.

Dr. Newitt read an interesting paper on "Coöperation between the Private Physician and the Health Department in the Control of Measles." Inoculation of exposed preschool children with citrated whole blood from immune older members of the family was recommended by Dr. Newitt. In the discussion that followed, cases were reported by members who have used the treatment and, although the number of cases was small, the consensus of opinion was enthusiastically in favor of the procedure. Favorable comment was made on the work of the members of the Health Department staff in advocating the treatment to parents and referring exposed preschool children to their family physician for the treatment.

E. J. DOUGHER, M.D., *Secretary.*

MONROE COUNTY

The last two meetings of the Monroe County Medical Society have been of especial interest.

On April 21, Dr. J. E. Gordon, of the Herman Kiefer Hospital, Detroit, spoke on "Acute Infectious Diseases of the Central Nervous System." He illustrated his talk with lantern slides.

On May 19, the society met at the new Ypsilanti State Hospital at 3:30 P. M. Dr. George F. Inch and Dr. O. Y. Yoder conducted a tour of the institution. The society was much interested in the features of the building for the care of the mentally diseased. Then the hospital staff entertained the society at dinner. The occasion was made festive by excellent vocal solos and duets by patients. In the evening, Dr. Inch read a paper on "The Diagnosis of Mental Diseases," and Dr. Yoder gave a talk on "The Mental Hygiene Movement." Monroe County Society surely enjoyed their visit to Ypsilanti State Hospital.

FLORENCE AMES, M.D., *Secretary.*

MUSKEGON COUNTY

May 28 the Muskegon Society had a dinner meeting at the Alhambria Hotel. Drs. Jos. Likely and Louis LeFevre gave papers on "The Use of Radium in Surgery" and "Backache," respectively. The June meeting was held at the Country Club at 6:30 P. M., June 10. After dinner Dr. Marshall of Flint gave an interesting talk on "Present Day Medical Economics." A long and interesting discussion followed.

A report of the death of Dr. Lucy Eames, Feb. 28, 1932, and Dr. Jacob Cramer, April 5, 1932, was made.

M. E. STONE, *Secretary.*

NORTHERN MICHIGAN

The June meeting of the Northern Michigan Medical Society was held at the Perry Hotel, Petoskey, June 9, 1932. The meeting was well attended, there being twenty-four members and two guests.

After dinner the meeting was called to order by President Stringham. The speaker for the evening was Dr. Sheets, Superintendent of the Traverse City State Hospital. Dr. Sheets gave an interesting talk on various phases of his specialties and the relation to the general practitioner. He spoke of how the general practitioner could assist his department in the care of the insane by proper filling out of the various papers necessary for the commitment of an insane person to a hospital.

The regular business of the society was then taken up. The secretary's report was read. The following committees were appointed: Program, Drs. Armstrong and Riffenberg.

The applications for membership of Drs. Monfort of Wolverine and Atkinson of Indian River were approved and these men given membership.

Dr. Mast, Petoskey, was elected delegate to the State meeting; Dr. Riffenberg, Gaylord, alternate.

The following motion was made and passed by the society: The Northern Michigan Medical Society protests the issuing of a license to out of state doctors for the purpose of practicing medicine for a short time in the resort section of this state. A copy of the resolution was to be sent to the State Board of Medical Registration.

A motion was made and carried that doctors be allowed to enter into temporary contracts, for the care of the indigent, until the society decides on a definite program.

Meeting adjourned.

E. J. BRENNER, *Secretary*.

O. M. O. C. R. O.

The meeting of the O. M. C. O. R. O. County Medical Society was held at West Branch, June 1st, and was attended by 100 per cent of the members. Dr. William Marshall of Flint, Michigan, gave a very interesting discussion on the economic survey being made by himself and committee. Following this he requested that the various members discuss their local problems, which were ably discussed by Dr. Paul Urmston and Dr. Hess of Bay City; also Dr. Keyport of Grayling, Dr. Riffenberg of Gaylord, Dr. Bogart of Flint, and Dr. Johnson, local health officer of West Branch District.

This was one of the most enthusiastic meetings held in several years.

C. G. CLIPPERT, M.D., *Secretary*.

ST. JOSEPH COUNTY

The St. Joseph County Medical Society held its regular monthly meeting at the Hotel Elliott in Sturgis, Friday evening, May 27, 1932.

Dr. P. O. Meness of Blodgett Memorial Hospital, Grand Rapids, gave a very interesting and instructive paper on Colles and hip fractures. A large number of lantern slide skiagrams were shown. The important diagnostic signs were indicated.

Dr. Hodgen of the same institution very capably outlined the treatment of these cases. Dr. Hodgen has devised several new methods in the treatment of orthopedic cases. In this paper he particularly stressed the importance of the after-care, which in many cases is overlooked or inadequate.

At the January meeting the following officers were elected for 1932: President, Dr. M. F. Parish, Sturgis; Vice-president, Dr. I. Jenks, Centreville; Secretary-treasurer, Dr. R. A. Springer, Centreville;

Delegate to the State Society, Dr. R. A. Springer, Centreville.

No more meetings will be held until Fall.

R. A. SPRINGER, M.D., *Secretary*.

OAKLAND COUNTY

The June meeting of the Oakland County Medical Society was held at the Hotel Heldenbrand.

The meeting was called to order by President R. H. Baker.

The minutes of the last business meeting were read and stood approved.

President Baker read the "Code of Ethics" adopted by Wayne County Medical Society in regard to Industrial Surgery. An Ekelund-Farnham motion successfully disposed of this matter to the Board of Directors.

The cancer material furnished by Dr. Bloodgood, for purposes of public teaching, was referred to the Board of Directors.

Dr. Furlong gave a résumé of the proposed activities of the Birth Control project.

Dr. Ekelund gave thanks to the Society for its cooperation in the Pre-school Round-up, and reported a letter of appreciation from the P. T. A.

Dr. Ekelund also called attention to the necessity for preparing for medical care of the indigents in Pontiac after January, 1933.

The County Health Department has asked our society to sanction a pamphlet concerning the "Care of Expectant Mothers," which they desire to send out under the auspices of the O. C. M. S. An Ekelund-Hoyt motion to approve this was carried.

Dr. Furlong reported a meeting of the Medico-Legal Committee last week. He expressed satisfaction with the coöperation the prosecutor's office is giving us. He also gave out a warning against an increase in number of malpractice suits due to the times.

Dr. F. H. Lashmet spoke on "Water Balance Treatment of Edema." The talk was praised by more than one as the best they had ever heard at a county society meeting.

Dr. Sherman deplored the fact that so small a number of members turned out to hear the program. As a matter of fact but twenty-two members were present, only seventeen of those being present during the scientific program.

Adjourned 11:00 p. m.

D. F. HOYT, *Secretary*.

HISTORICAL SKETCH

The organization of the medical profession in the Territory of Michigan was made possible when the Territorial Legislative Council on June 14, 1819, passed "An Act to incorporate Medical Societies for the purpose of regulating the Practice of Physic and Surgery in the Territory of Michigan."

Under this act the Medical Society of the Territory of Michigan was organized at Detroit on August 10, 1819, the following officers being elected: President, William Brown; Vice-president, Stephen C. Henry; Secretary, John L. Whiting; and Treasurer, Randall S. Rice.

The medical law granted authority to the Board of Censors to examine students and to issue licenses to practitioners of medicine and surgery. The law also provided that licensed physicians in any county, upon application to the Territorial Medical Society, were granted the right to form a county society, which, within the limits of the county, had the same rights as the parent society. The first group of physicians to take advantage of the latter provision were Drs. Cyril Nichols, Rufus Pomeroy, William Kittridge and David E. Lord, who, on June 12, 1827,

were granted permission to form the Washtenaw County Medical Society.

On June 28, 1831, the Territorial Medical Society granted permission to Drs. William Thompson, David L. Porter, Thaddeus Thompson and Ezra S. Parke to organize a Medical Society in the County of Oakland.

The Medical Society of the County of Oakland was formally organized at the Court House in Pontiac on July 14, 1831, the following officers being elected: President, William Thompson, Pontiac; Vice-president, John B. Chamberlain, Auburn and Pontiac; Secretary, David L. Porter, Pontiac; Treasurer, Ezra S. Parke, Bloomfield; Censors, Thaddeus Thompson, Troy; Ezra S. Parke, Alonzo Cressy, Pontiac; John S. Livermore, Rochester; and Israel B. Richardson, Pontiac.

Thus the Oakland County Medical Society was formally organized, the second county society to be formed in Michigan. There are but few records available as to the activities of the society during its early years. Occasionally a card appears in some of the early papers, giving notice of an approaching annual or semi-annual meeting; less frequently one will find a list of the officers elected at such a meeting.

The names of some of the other early members are as follows: Joseph C. Davis, Rochester; George Davis, Pontiac; Chester McCollom and George W. Williams, Auburn; Cyrus Chipman, Orville Morrison, Herrick Bromley, Rollin C. Sprague and John K. Hudson, Avon and Rochester; Ziba Swan, Ebenezer Raynale and Godfrey Waldo, Bloomfield and Birmingham; Samuel C. Allen and Nelson Abbey, Clarkston; Nathaniel Buel Eldredge, James G. Rodgers, John B. Barnes and Luther D. Whitney, Commerce; Alanson Hudson, Isaac Wixom, Oliver P. Strobbridge and Henry F. Walker, Farmington; Frederick Andros, John Jeffery, David C. Pratt and Henry S. Buel, Franklin and Southfield Township; William Gage and Ira C. Alger, Holly; Thomas Curtis and Cyrus Wells, Lyon Township; Barnabas Holmes, Daniel Arms, Henry K. Foote, Daniel A. B. C. Fox and Zebina M. Mowry, Milford; John C. Emery, Thomas Sellman and William R. Marsh, Novi; William Wilson, Pine Lake; Sterling Way Allen, Isaac Paddack, M. LaMont Bagg; Robert D. Lamond, Aaron L. Leland, Alexander Ayers, Ithamer B. Crawe, Max Myers, George Kinney Johnson, A. W. Rogers, Washington G. Elliott and Abriam P. McConnell, Pontiac; Henry K. Lathrop, Oakwood and Royal Oak; David W. Smead and Israel G. Bugbee, Orion; Pliny Power, Egbert Burdick, Erastus Spalding and Seth Sprague, Oxford; Henry Bradley, Levi C. Rose, Flemon Drake and Augustus E. Brewster, Royal Oak; Hiram Briggs and Edward Bartlett, Springfield; Oscar Harry Chipman, Nehemiah B. Stebbins and Isaac Adams, Troy; James M. Hoyt, Walled Lake; Gilbert E. Waters, White Lake; Major Curtis, Royal Oak and Birmingham.

Physicians from nearby counties, where a county society had not been organized, were eligible for membership. Among such members were John W. King, Grand Blanc; Washington Z. Blanchard, Shiawassee town, and Samuel W. Pattison of Dibbleville (now Fenton).

The original Oakland County Medical Society probably went out of existence about 1851 when the legislature repealed the medical law, a procedure that deprived the medical societies of their former powers and privileges.

The last recorded meeting was a semi-annual meeting held on December 7, 1850. President Alanson Hudson delivered an address, and Dr. G. K. Johnson, delegate to the A. M. A., delivered an extensive report on the plans of organization of the

association, as outlined at the annual A. M. A. meeting held at Cincinnati, Ohio, in May, 1850.

Drs. A. P. McConnell and Samuel C. Allen were admitted as members.

Drs. Hoyt, Bagg and Johnson were appointed delegates to the A. M. A.

Drs. McCollom, Elliott, and Walker of Farmington, were appointed delegates to the State Medical Association.

The Medical Society of Michigan was formally dissolved at a meeting held in May, 1851.

On March 8, 1854, the North-Eastern District Medical Society of Michigan was organized at Romeo for the purpose of establishing a strong medical organization in the district embracing the counties of Oakland, Macomb, Lapeer, St. Clair, Sanilac, and later, Genesee.

Dr. William Brownell, Utica, in the notice of the meeting, stated: "This call is made by the medical societies of Lapeer and Macomb conjointly, the only county organizations, I believe, in this part of the state.

"The lack of numerical strength in these societies has rendered them less efficient and useful than they would otherwise have been; and the object of this meeting is, if possible, to consolidate, in one organization, the members of the profession in the counties named. It is to be hoped that the medical men in this region will respond with zeal to the growing interest being manifested in the state and throughout the country in the importance of thorough medical organization."

Oakland County physicians were active in this organization, frequently serving as officers. Meetings were held in Oakland County at Pontiac and Rochester. Oakland County physicians known to have been members are as follows: Chester McCollom, Auburn; John P. Wilson, Pontiac; W. C. Smith, Troy; Jesse E. and Jeremiah C. Wilson of Rochester; Isaac Paddack, William T. Lauderdale, Pontiac; Francis M. Wilcox, Rochester; William H. Haze, Farmington; Franklin B. Galbraith, Pontiac; David Ward, Orchard Lake.

With the formation in 1902 of strong county societies, which became component parts of the Michigan State Medical Society, there was no longer a need for a district organization, hence, in 1903, the North-Eastern District Medical Society ceased to exist.

In 1870, the Flint and Pere Marquette Railroad commenced operating trains from Flint through Holly, Highland, Milford, Wixom, Novi, Northville, Plymouth, Wayne to Monroe and, following the opening of this road, the physicians from these and adjacent villages formed the Union Medical Society of Wayne, Washtenaw and Oakland Counties, which was formally organized at Northville, December 6, 1871.

Among the Oakland County physicians holding membership were the following: James M. Hoyt, Walled Lake; William F. Hovey, Milford; Alexander D. Hagadorn, Highland and Milford; Eli Woodman, Farmington; Zebina M. Mowry, Milford; Charles Gray Robertson, White Lake; Nathan C. Hall, Davisburg; William Aitcheson, Ortonville; Oscar N. Tindall and Seymour A. Manzer, Holly; Robert Johnston, Milford; Erwin A. Chapman, Walled Lake; George W. Lowry, Commerce; DeWitt C. Wade, Holly. This society was in existence for about ten years.

About 1885 the physicians of the western part of the County formed an Oakland County Medical Society which was in existence in 1894 and had 27 members. Meetings were held bi-monthly. The secretary was the only officer elected, the president serving pro tempore. As yet there are no data available as to the activities of this society. It has also

been mentioned as the Oakland County Academy of Medicine.

On June 27, 1892, the Pontiac Medical Society was organized with William McCarroll as secretary. The president was pro tempore only.

Pursuant to a circular letter issued by Dr. Colonel Bell Burr of Flint, Michigan, the Councilor of the 6th District, and a call sent out by Drs. Mason W. Gray, Jason Morse, George H. Drake and William McCarroll, the Executive Committee of the Pontiac Medical Society, the following members of the Medical Profession in Oakland County, Michigan, assembled in the Council Chamber of the City of Pontiac on September 9, 1902; J. J. Moore, Farmington; C. M. Raynale, Birmingham; D. W. C. Wade, Holly; R. LeBaron, Pontiac; N. T. Shaw, Birmingham; William Aitcheson, Ortonville; T. H. Prust, Pontiac; G. H. Drake, Pontiac; J. L. Campbell, Birmingham; H. S. Chapman, Pontiac; C. D. Morris, Pontiac; E. A. Christian, Pontiac; S. E. Galbraith, Pontiac; D. G. Castell, Holly; V. H. Wells, Pontiac; Robert Y. Ferguson, Pontiac; R. G. Dean, New Hudson; J. C. Black, Milford; Aileen M. Betteys, Oxford; G. W. MacKinnon, Oxford; B. C. H. Spencer, Rochester; John W. Fox, Orion; N. B. Colvin, Pontiac; F. B. Galbraith, Pontiac; H. C. Guillot, Pontiac; W. McCarroll, Pontiac; J. H. F. Mullett, Pontiac; John M. Truscott, Farmington; J. J. Murphy, Pontiac; M. W. Gray, Pontiac; I. H. Neff, Pontiac; Jesse Gillett, Amy; J. Morse, Pontiac; also Dr. Burr, Councilor, and Dr. J. C. Wilson of Flint, Vice-president of the Michigan State Medical Society.

At this meeting the Oakland County Medical Society was reorganized, a constitution and by-laws adopted, and the following officers elected: President, Franklin B. Galbraith, Pontiac; Vice-president, DeWitt C. Wade, Holly; Secretary-Treasurer, William McCarroll, Pontiac; Board of Directors, Charles M. Raynale, Birmingham, Edmund A. Christian, Pontiac, Mason W. Gray, Pontiac.

CHARLES A. NEAFIE, M.D.

NEUROPSYCHIATRIC COUNTERFEITS OF ORGANIC VISCERAL DISEASE

According to T. H. Weisenburg, J. C. Yaskin, Philadelphia, and Henry Pleasants, Jr., West Chester, Pa., a variety of neuropsychiatric manifestations often mask visceral disease of etiologic significance. Visceral disease may give rise to neurologic manifestations by reason of the fact that the viscera are innervated by the vegetative nervous system. They are not only influenced by the segmental and supra-segmental portions of the central nervous system and of the emotions but in turn are capable, when disturbed, of giving rise to a disturbance in the emotions and by reason of reflected pain to all sorts of peripheral phenomena. Psychic and emotional states influence the vegetative nervous system and visceral functions and vice versa. Illustrative cases are given wherein neuropsychiatric symptoms have masked cardiac, pulmonary, gastro-intestinal, pelvic and genito-urinary diseases. The causes of errors in diagnoses are traceable to faulty and incomplete examinations, to the failure of judgment and proper evaluation of neuropsychiatric manifestations, and to the fact that in predisposed individuals the earliest manifestations of visceral disease may be purely psychiatric in type. The author believes that, from the neuro-psychiatric standpoint, disease cannot be regarded as purely psychic or purely somatic. Every disease has a somatic as well as a psychic component and should be viewed from that standpoint for both diagnostic and therapeutic purposes. Moreover, every case should be studied in the light of a total situation.—*Journal A. M. A.*

THE DOCTORS' LIBRARY

LANG'S GERMAN-ENGLISH DICTIONARY OF TERMS USED IN MEDICINE AND THE ALLIED SCIENCES WITH THEIR PRONUNCIATION. Revised and Edited by Milton K. Meyers, M.D., Neurologist to the Northern Liberties Hospital; Chief of Nerve Clinic, St. Agnes Hospital, Fourth Edition Enlarged. P. Blakiston's Son & Co. Inc., Philadelphia. Price \$10.00.

This book is indispensable to one interested in obtaining a reading knowledge of German medical literature. It contains approximately 56,500 definitions, also, the pronunciation of German words. The work, which contains over 900 pages, is in the same style of binding and typography as Gould's well known medical dictionary by the same publishers.

AN EXPERIMENTAL AND CLINICAL STUDY OF PAIN IN THE PLEURA, PERICARDIUM AND PERITONEUM. By Joseph A. Capps, M.D., Professor of Clinical Medicine, University of Chicago, with the Collaboration of George H. Coleman, M.D., Assistant Professor of Medicine, Rush Medical College. A foreword by Anton J. Carlson, M.D., Ph.D., Chairman of the Department of Physiology, University of Chicago. Price \$3.00. The Macmillan Company, New York, 1932.

When one considers that the symptom that most frequently sends the patient to the doctor is pain, its importance is not likely to be over-estimated. Many serious attempts have been made to study pain, but the subject is in no danger of becoming exhausted. The present work by a clinician of note deals with the subject as it affects the thoracic cavity and contents. This brief monograph of ninety-nine pages embodies observations made over a period of twenty years, chiefly at the Cook County Hospital, Chicago. It is well illustrated with line drawings and diagrams.

CLINICAL INTERPRETATION OF LABORATORY REPORTS. By Albert S. Welch, A.B., M.D., Clinical Instructor in Medicine in the University of Kansas School of Medicine, Kansas City, Kansas; Director of the Laboratory of the Alfred Benjamin Dispensary, etc. With Sixteen Illustrations and a Frontispiece in color. P. Blakiston's Son and Co., Inc., Philadelphia, Pa.

Clinical laboratory, or we might perhaps say laboratory diagnosis in general, has come in for considerable disparaging criticism. The chief difficulty lies in the fact of the inability to correlate the laboratory with the clinical findings, and vice versa. The present book forms a sort of connecting length between the technical laboratory and the clinician. It would be well if both laboratory worker and clinician were familiar with its contents, inasmuch as the book serves as a medium of introduction of one to the other. Speaking of interpretation of laboratory reports, the author does not include the X-ray laboratory. There are chapters on Urine, Blood, Blood Chemistry, Serology, Smears, Cultures, Cerebrospinal Fluid, Gastric Contents, Duodenal Contents, Feces, Sputum, Skin Tests, Tissues, Basal Metabolic Rate, and Electrocardiogram. The work is well printed, less well illustrated with line drawings and there is a frontispiece in color.

PRACTICAL TREATMENT OF SKIN DISEASES, WITH SPECIAL REFERENCE TO TECHNIQUE. A PRACTICAL MANUAL FOR PRACTITIONERS AND STUDENTS. By Eduard Ahlswede, M.D., New York and Hamburg. Formerly Assistant Physician, University Skin Department, Direction of Prof. Unna, Eppendorf Hospital, Hamburg. Forewords by Howard Fox, M.D., New York, and Prof. Dr. P. G. Unna, Hamburg. 798 pages, 77 illustrations. Price \$12.00 net. Paul B. Hoeber, Inc., Publishers, New York, N. Y.

This work is, as stated in its title, a practical manual on dermatology for practitioners and students. It is a work for the general practitioner rather than the specialist in skin diseases. The author has

stressed the ambulatory treatment of skin diseases as they are found in everyday practice. He has explained the technic of treatment in such minute detail that it is easy to follow even by the inexperienced. As a principle the author emphasizes the importance of investigating the cause of skin affections where possible; treatment is a matter of eliminating the causative factor rather than allaying symptoms.

PHYSIOTHERAPY: ITS PRINCIPLES AND PRACTICE.

By F. Howard Humphris, M.D.(Brux.), F.R.C.P. (Edin.), M.R.C.S. (England), D.M.R. and E.(Camb.), Hon. Consulting X-ray Physician and Electrotherapist to The London Clinic, and Ralph E. Stuart-Webb, M.B., B.S.(Lond.), M.R.C.S., L.R.C.P. With contributions by Frank Romer, M.D., A. E. Hayward Pinch, F.R.C.S., and A. Gordon Watson, M.D., 399 pages; 74 illustrations. The Macmillan Company, New York, 1932. Price \$4.50.

The author is one of the foremost physical therapists in England; this book, therefore, reflects an authoritative British viewpoint upon this highly technical and exceedingly diverse subject. One half of the book: Principles, briefly describes the numerous electrical and phototherapeutic agencies; X-ray and radium therapy; massage and manipulation; spa treatment; melted paraffin-wax bath; foam therapy; carbon dioxide snow; and vibration. The concluding half of the work: Practice, enumerates the various diseases and conditions in which some one or other physiotherapeutic agency may be indicated; and the technic of its application. Owing to the necessarily abbreviated space permissible to each of the many important and semi-important agencies enumerated, the work is especially to be commended to the informative attention of those who have no particular urge to qualify as physical therapists but do desire to intelligently comprehend the why and the wherefore: the indications and contraindications, for this imperfectly appreciated essential to successful practice. It should also be valuably instructive for those physical therapists who realize that only by interchange of thought and comparison of methods can an assured science and superlative results be eventually evolved.

J. E. G. W.

PRINCIPLES OF PREOPERATIVE AND POSTOPERATIVE TREATMENT. Reginald Alex Cutting, M.D., C.M., M.A., Ph.D., Assistant Professor of Surgery, Louisiana State University Medical Center; formerly Assistant Professor of Surgery, Tulane University Medical School, New Orleans. Foreword by Rudolph Matas, New Orleans. With 76 illustrations. Paul B. Hoeber, Inc., New York, 1931. Price \$10.00.

In reviewing Cutting's latest contribution to surgery, "Principles of Preoperative and Postoperative Treatment," we have a book which deals in detail with the Surgical and Medical Problems of Operative Surgery. By this I mean not the Problems that are found in the operating room, but those that occur both before and after operative work is attempted. Therefore, the title of the book is self-explanatory. These facts bring out again the danger of the surgeon whose interest begins and ends at the operating room door. Enough time should be spent on the taking of the history and investigation of the patient, both as regards occupation and habits. Of special interest is Chapter No. 6 on "Water Balance, Dehydration, and the Preoperative and Postoperative Administration of Fluids," and following in Chapter No. 7, "Disturbances of Acid-Base Equilibrium: Acidosis and Alkalosis." The chemistry and comprehensive ideas which are given in these two chapters are undoubtedly (if followed) bound to help, especially in the extreme cases. Chapters Nos. 8, 9, 12 and 13 deal in a very thorough manner with the treatment of the abdominal conditions.

The endeavor of the surgeon should be to reduce

postoperative morbidity and mortality. Doctor Cutting has shown what means should be employed to accomplish this result.—W. D. B.

THE EXPECTANT MOTHER'S HANDBOOK by Frederick C. Irving, M.D., Professor of Obstetrics, Harvard Medical School, Visiting Obstetrician, Boston Lying-In Hospital. With illustrations. Boston and New York. Houghton Mifflin Company, The Riverside Press, Cambridge. Price \$1.75.

Obstetricians and physicians in general practice who come in contact with the expectant mother will welcome this little handbook. It is authoritatively written in non-technical language and supplies all the information that and a great deal more than the average expectant mother would think of asking. It cannot be too highly recommended to the more intelligent expectant mothers. Many, however, would not understand if the whole subject were explained to them in words of one syllable. However, for the class for which it is intended we know of no better compendium of information.

GASTRIC SECRETION AFTER STIMULATION WITH HISTAMINE IN PRESENCE OF VARIOUS TYPES OF GASTRIC AND DUODENAL LESIONS

Mandred W. Comfort and Arnold E. Osterberg, Rochester, Minn., found that histamine is of value in distinguishing true from false achylia. However, histamine failed to cause a secretion of free acid in one case in which the Ewald meal did cause such secretion; it produced secretion of free hydrochloric acid of a concentration less than that evoked by the Ewald meal in two other cases, and it produced concentration only equal to or within 10 points of that evoked by the Ewald stimulus in fourteen cases. The histamine test may distinguish the more serious forms of secretory disturbance from those of a transitory nature, but it does not always give conclusive information as to the underlying anatomic lesion or the prognosis. It would appear that histamine does not always evoke a maximal response and that the constancy of the response can be questioned. In the authors' experience, it is not apparent that the response of gastric secretion to histamine is of greater value than the response to the Ewald meal in the differential diagnosis of peptic ulcer and gastric carcinoma. In cases in which reduced concentration of free acid and reduced volume have diagnostic significance, as in gastric carcinomas, the Ewald meal gives information which compares favorably with that obtained after the use of histamine. Cases of gastric carcinoma were encountered in which the concentration of free acid and the volume have been almost as great as those obtained in cases of duodenal ulcer. So far as the volume of gastric secretion is concerned, there appears to be a significant correlation between volume and free acidity; on the other hand, the volume of secretion, as aspirated, varies widely in all types of lesions studied. Its diagnostic significance is of such limited value and the possible errors in estimation so great that it does not seem to add much information of diagnostic value. There is such a high correlation between the highest concentration of total chloride and of free acid, following stimulation by histamine, that determinations of total chloride following administration of histamine offer little extra information concerning the secretory activity of the stomach and do not add sufficiently to the practical value of histamine as a test of secretory capacity to warrant the estimation of concentration of chloride. The authors believe that the advantages of the stimulus of histamine over the Ewald meal are not great enough to warrant the adoption of the fractional method with stimulation by histamine as a routine. The

value of histamine in the study of chemical values after resection of the stomach, or gastro-enterostomy, lies in disclosing free acidity, masked by the neutralizing influence of the base in the regurgitated duodenal or jejunal juice. Additional evidence of the unimportance of the humoral or hormonal influence of the antral portion of the stomach in maintaining the secretory capacity of the stomach is mentioned briefly.—*Journal A. M. A.*

RHEUMATOID (INFECTIOUS) ARTHRITIS AND ACUTE RHEUMATIC FEVER: DIFFERENTIAL DIAGNOSIS

In seventeen patients with rheumatoid (infectious) arthritis on whom A. M. MASTER and HARRY JAFFE, New York, took electrocardiograms daily for an average of fifty-three days, only the slightest evidence of myocardial involvement was recorded. In sixty-three cases of acute rheumatic fever, definite electrocardiographic evidence of myocardial involvement appeared in 100 per cent. The authors believe that rheumatoid (infectious) arthritis, no matter what it may be, is not a disease of the heart; acute rheumatic fever is preëminently a carditis. The clinical application is this. In a case in which the differential diagnosis between rheumatoid (infectious) arthritis and acute rheumatic fever is difficult, if there are no electrocardiographic evidences of myocardial involvement, the authors would be prone to call it the former disease, whereas when there are electrical tracings definitely indicative of myocardial involvement they would be prone to call the disease acute rheumatic fever. The former affects the heart to the slightest degree, if at all; the latter to a maximum extent.—*Journal A. M. A.*

COMPLEX OF ECZEMA: DIAGNOSTIC AND ETIOLOGIC ANALYSIS

JOHN H. STOKES, Philadelphia, calls attention to the fact that the Germans, able students of the details of pathologic mechanisms, call eczema that form of dermatitis in which the epidermis exhibits an intrinsic quality of hypersensitiveness to irritants, specific or general. About 5 per cent of all human beings exhibit this intrinsic hypersensitivity. In order to clarify the field of "eczema" he proposes, for the moment, *not* to adopt this definition of eczema but to use a broader one, based on the view that all inflammations of the skin exhibit a complex rather than a simple etiology, analyzable on careful study into what might be called predisposing background and exciting causes. He defines an eczema, then, as a persistent dermatitis in which the predisposing causes or background outweigh the immediate cause or causes. The new German concept fits into this scheme as a subhead, for it becomes "eczema allergicum," to coin a phrase, in which epidermal hypersensitivity is the factor that dominates the picture. Thus one may speak of neurogenous eczema, or even neuromycotic eczema, in which an exciting cause such as a yeast infection leads to a dermatitis whose extension and persistence is in part due to the overshadowing influence of the nervous system on the sweat and vasomotor mechanisms, which supplies the background for the yeast growth. Thus "eczema" becomes again a broad etiologic conception, harmonizing with the very wise tendency of dermatology to return to general medical concepts and relations for the full comprehension of its problems. This seems a wiser use of the term than to apply it to single, local or special phenomena, anatomic or functional. The author proposes to speak not of seborrheic eczema, or mycotic eczema, or

even of pure allergic eczema (a term of damnation to the Germans), unless the named designation overwhelmingly dominates the picture. Instead, he speaks of these symptomatic pictures as if they were components in a complex and looks at all eczema for the moment in the light of their interplay. He enumerates ten component factors that make up the etiologic background of "eczema" as commonly understood in American practice thus: (1) the hereditary or familial predisposition factor; (2) the ichthyotic or dry skin factor; (3) the seborrheic habitus or sebaceous dysfunction (oily skin) factor; (4) the pyogenic factor; (5) the mycotic or fungus infection factor; (6) the focal intoxication factor; (7) the metabolic factor with special reference to carbohydrate metabolism; (8) the allergic or hypersensitivity factor, general and specific; (9) the neurogenous factor, and (10) the diathetic state or eczema-asthma-hay fever complex. Distribution tells a surprising amount about an eruption, even before one has clearly identified the elementary lesions or parts of which it is made up. Certain of the foregoing factors have distributions roughly amenable to diagram. By a careful study of the stripped patient, the proportion of these various components taken in connection with the character of the lesions and the landmarks of ichthyosis (which is not a dermatitic state) may be estimated as the basis for diagnosis and treatment. A painstaking study of the patient's history and of familial and hereditary elements further contributes to diagnosis and prognosis. Of especial importance are the ichthyotic, seborrheic and pyogenic trends and the neurogenous and allergic background.—*Journal A. M. A.*

ABDOMINAL PAIN DUE TO HYPOTHYROIDISM

J. William Hinton, New York, calls attention to hypothyroidism as a factor in producing abdominal pain, and emphasizes that patients giving negative roentgen evidence of changes in the gastro-intestinal tract, the gallbladder and the genito-urinary region, as well as negative results in the other laboratory procedures, may in a small percentage of cases be suffering from hypothyroidism; in this group with negative roentgen observations a metabolic determination should be done before any treatment is instituted or before the patients are submitted to an exploratory laparotomy, as occasionally a diagnosis will be established and the symptoms relieved with thyroxine and thyroid extract, the patient being saved a needless operation. There seems little question that, in the past, probably quite a few exploratory procedures have been undertaken with negative results or at least with symptoms persisting after the operation, in which case the entire trouble was referable to the thyroid gland. The condition is probably due to a hypoperistalsis with a pylorospasm and retention of undigested food in the stomach; after the patient vomits the retained food, or the stomach slowly empties, the symptoms are relieved. The author does not want to leave the impression that all patients with abdominal pain in which the roentgenologic observations are negative are suffering from hypothyroidism, for such is not the case; but if this condition is borne in mind a definite diagnosis can be made in a small percentage of cases, and the individual can be benefited by the proper medication. On the other hand, a patient may have a minus metabolic rate and a definite intra-abdominal lesion which will need either medical or surgical treatment. Of course, no benefit could be expected from the abdominal pain by treating the hypothyroidism and neglecting the other condition that is actually causing the pain.—*Journal A. M. A.*

KALAMAZOO
• CIVIC •
AUDITORIUM



KALAMAZOO—OUR MEETING PLACE

NESTLING among friendly hills, lies the happy, busy city of Kalamazoo; focal point of southwestern Michigan. The census of 1930 shows a population of 68,109 in Greater Kalamazoo with 54,768 within present city limits. Evidence of a healthy, steady growth is evident by comparing with the figure of 48,480 within limits in 1920.

The size of the city plus its transportation and market and its geographic location has

favorable. Rich, fertile soil in the valley of the Kalamazoo River has fostered diversified agriculture—of importance in insuring a food supply at reasonable prices.

Kalamazoo stands at the hub of a large trading area. Retail operations have prospered. The fortunate position of the city—halfway between Detroit and Chicago—insures close metropolitan connections and transportation facilities, so vital to the growth of industry.



Kalamazoo Civic Auditorium—Exterior

established it as the industrial center of southwestern Michigan.

Well diversified industries, the leading of which is the manufacture of paper and paper products, establishes a condition of continued production and employment free from serious market or seasonal reactions.

When in 1829 Titus Bronson founded the community which has since become the city of Kalamazoo, he selected a site peculiarly

The Kalamazoo area is populated ten times as densely as the average for the United States. The main east and west highway in Michigan, U. S. 12, passes through the city. Over one-half the population of Michigan lives within five miles of this road.

Such then is our meeting place to which the city and local profession bids you welcome during our annual session, September 13-15.

HISTORY OF VARIOUS MEDICAL ASSOCIATIONS IN KALAMAZOO COUNTY

RALPH W. SHOOK, M.D.

THE first report of any medical organization in Kalamazoo County was the year of 1848. Its members were physicians from Allegan, Van Buren, Calhoun and Kalamazoo counties. This society lasted approximately a year when each county formed its own society in 1849. The one in our county speedily dissolved, as did likewise those in the outlying districts.

In 1853, a second attempt was made to organize a society. Its name being the "Southwestern Medical Association of Michigan." After a few meetings at the

February 11, 1868, the "Kalamazoo Medical Association" was organized by Drs. Pratt, Hitchcock, Southard, Fiske, Mottram, Chapin, Johnson and Porter. This society met monthly at the home of its members, "whereby sociality is cultivated as well as science." The meetings gradually became farther apart and on February 27, 1878, pursuant to a call of the secretary of the "Kalamazoo Medical Association," a meeting of the physicians of Kalamazoo County and vicinity met at Corporation Hall for the organization of a District Med-



Kalamazoo Civic Auditorium—Interior
Where the General Sessions will be held.

Court House in Kalamazoo, it gradually disintegrated.

On November 30, 1865, a third attempt at foundation was made at a meeting of the physicians of Kalamazoo and adjoining counties. They met at the Court House and organized the "Kalamazoo Valley Medical Society." Of those physicians present, twelve became charter members and were to meet at their various homes. However, after a year or two it disbanded.

ical Society. This meeting was the anlage of the present "Kalamazoo Academy of Medicine," and was known as the "Kalamazoo District Medical and Surgical Association." Upon a motion, Dr. Hitchcock of Kalamazoo, Dr. Duning of Paw Paw, Dr. Nickhols of Martin, were to draft a constitution, its contents being as follows:

Its members are limited to Kalamazoo and contiguous counties and must be regular practicing physicians.

New members may be admitted by recommendation of the censors and upon signing the constitution.

The officers should be a president, two vice presidents, a secretary and treasurer

and a board of censors composed of three members." as the "Kalamazoo Academy of Medicine" was perfected and on January 29, 1884, the constitution was voted on and accepted by the charter members, forty in number.



DR. R. A. MORTER
President Kalamazoo Academy



DR. R. J. HUBBELL
Secretary Kalamazoo Academy

and a board of censors composed of three members.

The meetings shall be held the last Wednesday of January, April, July and October.

Dr. H. O. Hitchcock of Kalamazoo was the first president. Dr. B. Barnum of Schoolcraft and Dr. Duning of Paw Paw were vice presidents. Dr. J. W. Fiske, Dr. H. U. Upjohn of Kalamazoo and Dr. Chase of Otsego were censors. J. M. Snook was the secretary and treasurer.

This organization had seventeen charter members and continued to grow, its meetings being every three months. By September, 1883, there were forty-five members of the "Kalamazoo District Medical and Surgical Association," and on the twenty-fifth of this month a quarterly meeting was held in which a motion for incorporation under the laws of Michigan was introduced.

Drs. Hemenway, Duning and Van Antwerp were appointed to carry out the legal side and draft the constitution. In December, 1883, the incorporation of the "Kalamazoo District Medical and Surgical Asso-

The men who were responsible for the organization were: H. H. Schaberg, E. C. Adams, H. O. Hitchcock, Foster Pratt, W. B. Southard, W. Mottram, Adolph Huckstein, O. F. Seely, W. F. Stilwell, I. W. Fiske, H. U. Upjohn, J. M. Snook, E. C. Southard, O. B. Ranney, J. M. Rankin, H. B. Osborne, C. H. McKain, W. L. Worchester, O. F. Burroughs and H. B. Hemenway. The officers elected were: Josiah Andrews, president, and H. B. Hemenway, secretary.

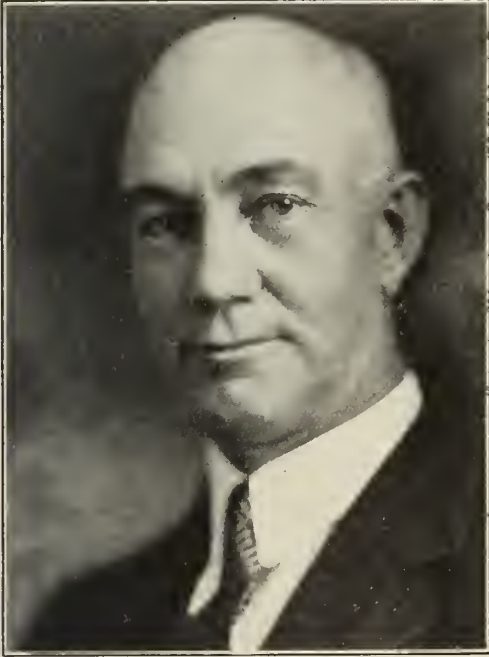
The members agreed to associate themselves for a period of thirty years into a society for literary and scientific improvement in the medical profession, the society to be known as the "Kalamazoo Academy of Medicine," whose office for business shall be in the city of Kalamazoo, Michigan.

Interesting articles of the constitution are as follows:

Any legally qualified physician or surgeon, who does not subscribe to, nor practice according to any exclusive dogma of medical practice, may become a member of

this "Academy" upon conditions prescribed in accordance with its by-laws. The duty of each member is to do all in his power to promote the object of this "Academy." This organization adopted the Code of

in various hotels and private places. Previous to the meeting on May 3, 1887, the members had furnished the scientific discussion, but at the meeting on this date, Dr. Carstens of Detroit delivered the first scien-



DR. C. E. BOYS
Councilor, 4th District



DR. F. T. ANDREW
General Chairman

Ethics of the American Medical Association as a rule to govern its members in practice.

The officers of the "Academy" were, a president, first and second vice-president, a secretary, a treasurer, a librarian and a board of censors consisting of six members. The president, secretary and board of censors constituted a board of directors. The officers were elected at the first regular meeting of the "Academy" in each calendar year. In case of a vacancy in any office by death, resignation or deposition, an election was held to fill such a vacancy at the next regular business meeting.

The meeting of the "Academy" shall occur upon the last Tuesday of each alternate month beginning with January, at 1:30 P. M. The January meeting shall be the annual meeting and here shall occur the election of officers. The Annual dues shall be \$1.00 per year, payable at the month of January.

At the third annual meeting in 1887 it was reported that there were fifty members of the "Academy" and an average attendance was twenty, the meetings being held

tific paper and it was moved that the practice be continued at regular intervals.

The problems of the "Academy" were many but all obstacles were met well and in the session of January, 1889, there were sixty-eight members present. On May 9, 1889, the State Medical Society had its annual meeting in Kalamazoo as guests of the "Academy of Medicine."

In January, 1893, Dr. and Mrs. E. H. Van Deusen donated a sum of money to the erection of a public library with a room set aside for medical meetings and a library to be used for no other purpose. This was completed in May, 1893, and the first meeting in the new permanent home was held on May 29, 1893. For the previous three years the meetings had been held at the Court House.

Commencing in the year 1900 the "Academy" held monthly meetings until 1910, at which time a bi-monthly schedule was started.

The bi-monthly meetings continued until October, 1923, when the time was changed to evening and the meetings were followed

by a dinner at some hotel. The monthly meetings have continued until the present time and due to the appropriate gift of kitchen equipment from the Upjohn Com-



First Presbyterian Church House

pany in 1926, the dinners are now held in the "Academy" rooms.

On July 1, 1902, the "Academy" adopted the laws as set forth by the Michigan Medical Society on June 26, 27, 1902. Since the partial re-organization in July, 1902, the "Kalamazoo Academy of Medicine" has carried on its activities for the betterment of local health and at the present time has one hundred and thirty-two members.

On September 13, 14, 15, 1932, this organization will entertain the members of the State Medical Society for its one hundred and twelfth annual meeting. This makes the fifth meeting of its kind in Kalamazoo. The first was on May 9, 1889, the second on May 4, 5, 1899, the third in the summer of 1909 and the fourth on May 25, 26, 1920. The "Academy" also entertained the members of the Northern Tri-State Medical Society on November 5, 1919.

KALAMAZOO COLLEGE

More than ninety-six years of educational leadership constitute the record of Kalamazoo College. Granted a charter in 1833 by the Legislative Council of the Territory of Michigan, Kalamazoo College was founded by the Rev. Thomas W. Merrill and Caleb Eldred, three years before Michigan was admitted as a state.

Throughout the many years of the Col-

lege's history the ideals of those pioneers have been maintained in the attempt to establish what President Allan Hoben has defined as a "Fellowship in Learning." Out of the frontier spot has grown a modern progressive community. The campus in the wilderness is now a spot of beauty in a rich industrial center. The oaks of that pioneer day still stand as a stalwart inspiration to Kalamazoo students.

The educational and cultural advancement at Kalamazoo complements the growth of community life until today only the best accepted methods of education are in practice. It is fully accredited by the North Central Association and the American Association of Universities and Colleges, a status which allows credits earned at Kalamazoo to be exchanged hour for hour and unit for unit in our country or abroad.

Women graduates are eligible for active membership in the American Association of University Women. The contribution of Kalamazoo College in the establishment of women's rights by virtue of its unique position as the first co-educational institution in Michigan, as well as one of the first in the nation, preceded the birth of the A. A. U. W. in 1881.

Built on the concept of the small college and operating on the basis of selective admission, the whole educational process is personal and is permeated with the atmosphere and aim of Christianity. Class instruction takes the form of the round-table discussion, with both the professor and the student assuming the role of "learners," each contributing knowledge of the subject at hand.

The high standards maintained at Kalamazoo have been materially strengthened by the recent increases in physical equipment and endowment. Operating on an endowment fund of approximately one-quarter of a million in 1922 the College has increased its resources until today a permanent endowment of \$2,000,000.00 makes it possible to have \$5,000.00 at work for every student in college.

Beginning in 1923 with the erection of the President's home on the northwest corner of the twenty-five acre campus the following buildings have been added to the physical equipment at Kalamazoo College: Mary Trowbridge House, dormitory for women; the R. E. Olds Science Hall, gift of Ransom E. Olds, automotive manufac-

turer of Lansing; seven faculty homes, housing seven different department heads; the Minnie Mandelle Library, dedicated at the 1930 Homecoming, the bequest of the

needs, became a truly representative State institution, including practically every county of the state in its student body, as well as a sprinkling of students from other



Kalamazoo Park

late Mary Senter Mandelle of Stonington, Conn., and Detroit, and the rebuilt Tredway Gymnasium, the bequest of the late Arthur C. Tredway, Detroit, a former athlete of the class of 1894.

Kalamazoo College has contributed many graduates who have found a liberal arts training valuable in such professions as law, engineering, education, the ministry, medicine, journalism and social service.

WESTERN STATE TEACHERS COLLEGE

Kalamazoo is the home of Western State Teachers College, the youngest of Michigan's four Teachers Colleges and yet one which has so entirely met the needs of the teaching profession that it has grown to one of the largest institutions of its kind in the United States.

Primarily established more than a quarter of a century ago for the training of teachers coming from the Western section of the State, the efficiency that has been brought into the College, and the changing needs of the educational world during this period, and the changing needs of the state, with its wonderful development in an economic way and its tremendous increase in population, have been such that Western State Teachers College, in meeting these growing

states and nations, into which knowledge of Western State Teachers College has gone.

Every effort has been made during this time to constantly strengthen the faculty in every department of the College. Its enrollment throughout the departments and in the institution as a whole reflects the wisdom and the foresight of President Dwight B. Waldo, Western's only president, in the building of a strong institution, such as the standing of its faculty will indicate.

While its main purpose is to prepare teachers for the public schools, the preparation has been such that upwards of 125 of Western's graduates are now teaching in colleges over the country, while a long list of them are also acting as superintendents, school commissioners, principals, critics, etc.

When its purpose, held in common by all of the Teacher Training institutions of the state, is fully realized, every child in Michigan will be taught by a teacher of vigorous health, high mentality, broad and thorough scholarship, high professional spirit, genuine skill in the art of teaching, culture in the amenities of life, winning personality, and sound character.

Western State Teachers College seeks to attract young men and women in whom these high qualities are potential. By careful attention to the formation of those habits which make for good health; by careful development of sound bodies through

physical education; by courses of study which introduce students to the best in thought and life and at the same time give as thorough knowledge in the various branches of study as possible in the time devoted to the work; by teaching which develops right habits of study, an appreciation of scholarship, and an understanding of the principles underlying the teaching process; by providing ample opportunity for prospective teachers to become acquainted with children and to observe and practice teaching in its varied system of schools; by developing initiative, self-reliance, and community spirit by voluntary participation along the line of the student's taste or interest in a wide range of extra-curricular activities; by encouraging in every way a sane, wholesome social life.—in all these ways the College aims to develop in its students the essential qualities of the teacher, and, as a consequence, to do its part in giving the State of Michigan a body of teachers thoroughly trained for every phase of their work. The College is progressive in educational policy and practice. It fosters a wholesome spirit of democracy.

Western State Teachers College extends an invitation to the members of the Michigan State Medical Association to visit the campus and to become better acquainted with this important and rapidly growing state institution.

KALAMAZOO STATE HOSPITAL

R. A. MORTER, M.D.

The first reference to the care of the insane in Michigan is to be found in an act creating the Board of Superintendents of the Poor in Wayne County, approved March 7, 1834. This act made it lawful for the directors of the poor of the several townships of the territory of Michigan and for the mayor, recorder and aldermen of the City of Detroit, or any person whom they should appoint, to cause to be confined, either in the county jail or other place of security, those paupers who were not of sound mind.

When Michigan was admitted to the Union in 1837 there was no provision for the care of the insane except as they were detained in the county prisons. The first reference to an insane inmate of a county

poorhouse in Michigan is contained in the records of the Wayne County Poorhouse under date of March 22, 1841. At this time Bridget Hughes was admitted, and the entry "crazy" was placed beside her name in the register. In the years that followed it was the common practice of Wayne County to send their insane to the county poorhouse.

The subject of public provision for the insane of the State of Michigan was first introduced for Legislative action in 1848. A joint resolution of the Senate and the House of Representatives made it the duty of the assessors in their annual assessment rolls to report the number of insane, deaf and dumb, and blind in their respective townships. The assessors finished their canvas and reported to the 1851 Legislature that there were between 300 and 400 insane in the State of Michigan, the majority of which were confined in county houses and jails. Before the Legislature of 1848 adjourned an act was passed which provided for the establishment of a hospital for the insane and an asylum for the deaf and dumb, and blind. Eight sections of "Salt Spring Land" were appropriated for the erection of the buildings. The government of the proposed institutions was vested in a Board of Trustees. In 1849 the Legislature increased the appropriation of land to fifteen sections (9,600 acres) and required the immediate selection of land, the proceeds from the sale of which were to be credited to the Asylum Fund. It further made it the duty of the Board of Trustees to select suitable locations. The first Board of Trustees held their first meeting at Detroit, May 22, 1849, and in their first report of December 22, 1849, made public their selection of a site for the asylum for the insane at Kalamazoo. The citizens of that village donated as an inducement \$1,506.00 in conditional notes and ten acres of land.

The following Legislature appropriated ten additional sections of land, making a total of 16,000 acres and \$5,000.00 from the general fund, to be used by the Trustees in the construction of the asylum and defraying other expenses. The land did not sell and the \$5,000.00 appropriated was not sufficient to start the construction. An urgent appeal to the Legislature of 1853 resulted in the appropriation of \$20,000.00 to be used as a purchasing and construction fund. The erection of an institution ca-

pable of accommodating 200 patients was recommended.

When the Legislature met in 1855 the report showed that \$17,487.48 had been spent

eminent physicians, surgeons and neurologists who frequently are called for consultation and operation. The therapy administered by the staff is augmented by a corps



State Normal College, Kalamazoo

at Kalamazoo toward the construction of buildings. This Legislature appropriated an additional sum of \$67,000.00 as an asylum construction fund and the building program continued.

On August 29, 1859, the Michigan Asylum at Kalamazoo, the first state institution of the kind in the State of Michigan, was formally opened, eleven years after the enactment of the law which provided for its establishment.

A few decades ago little was known regarding the causes of nervous and mental diseases. In those days custodial care of the insane was about all that could be expected. The medical profession spurned the practice of psychiatry because of the apparent hopelessness for results in this branch of medicine. The Legislature of 1911 changed the name of the Michigan Asylum for the Insane to Kalamazoo State Hospital. This change in the name was brought about as result of a recognition of the passing of the old asylum and the approach of a Hospital for the mentally diseased, equipped to do scientific work equal to that done by any General Hospital.

Today the Kalamazoo State Hospital represents an investment of nearly four million dollars and has a population of about 2,800 patients.

The chief executive of the Kalamazoo State Hospital is a physician registered to practice medicine in the State of Michigan. The medical staff consists of nine registered physicians who are resident at the hospital. There is a visiting and consulting staff of

of registered nurses, occupational therapists, laboratory technicians, psychologists, social workers and attendants.

When a new patient is admitted into the hospital he is put to bed and the case is studied the same as in any general hospital. A complete examination is made at once and the laboratory tests are given as soon as possible. An early effort is made to find some organic disease which may be the cause or the contributory cause of the individual's mental illness. If etiological factors or organic disease are not located we do not send the patient off to a so-called chronic ward and tell the relative that it is an incurable case. The case may be transferred from the Receiving Hospital, but he is kept under continued observation and treatment with the hope that something will be discovered which will return the patient to a normal mental state or prevent profound mental deterioration.

The American Medical Association recognizes the Kalamazoo State Hospital as a teaching hospital and has admitted the name of this institution to the Hospital Register. Our School of Nursing and our residency in neuropsychiatry are approved by the Council. We have a School of Occupational Therapy and plan soon to open a School for post graduate work in psychiatric nursing.

Unfortunately, during this present economic depression, there are those among us who still believe that the insane should have custodial care only. It is our opinion that every State Hospital should be conducted on the same standard as recognized general

hospitals. It is hoped that the medical profession of this great commonwealth will see that this standard is maintained in this State.

We honestly believe that the time will come when the surgical and medical practice in the State Hospitals for the insane will be such that these hospitals will be accepted by the American College of Physicians and the American College of Surgeons.

BORGESS HOSPITAL

Borgess Hospital, located in the suburbs of Kalamazoo, Michigan, was opened for the first time in August of 1889. Previous to that time the only place where a poor sick stranger might find a home was at the county jail.

It happened one day a phone call summoned the priest to attend a man in the jail, who was apparently very sick and a stranger without friends. Monsignor O'Brien, then pastor of St. Augustine's Parish, went to the dying man's assistance. The existing conditions and the pitiable story of the poor victim found a refrain in the sympathetic heart of Monsignor O'Brien for then and there he resolved to do all in his power to establish a hospital where the poor and afflicted would receive proper care.

Just at this time Right Reverend Bishop Borgess of Detroit was visiting Monsignor O'Brien and gladly coöperated with his plan by offering five thousand dollars to aid the worthy cause.

Immediately measures were taken, and an old mansion with spacious grounds was purchased on south Portage Street. In November of the same year Borgess Hospital opened its doors to its first patients, under the management of the Sisters of St. Joseph, and since then many poor and destitute have found a home within its sheltering walls.

In 1917 the hospital quarters were found too small to accommodate the great number of patients, and a thirty-three acre tract of

land was purchased on Gull Road, and a new building was erected and called New Borgess Hospital, with an accommodation of 125 beds. In 1927 a new addition was added to this building with an additional accommodation of 225 beds, and in November, 1929, both hospitals were combined and is now known as Borgess Hospital, located on Gull Road.

The hospital staff is known as the open staff and meets on the first Tuesday of each month.

Borgess Hospital is on the accredited list of the American College of Surgeons and a life member of the Catholic Hospital Association.

In connection with the hospital is a training school known as the St. Camillus School of Nursing with an accommodation for about eighty students. The training school is affiliated with Nazareth College, Nazareth, Michigan.

HOTELS AND RESERVATIONS

NEW BURDICK HOTEL

175 Rooms

Single Rooms Without Bath.....	\$1.50, \$1.75, \$2.00, \$2.50
Double Rooms Without Bath.....	2.50, 3.00, 3.50
Single Rooms With Bath.....	2.25, 2.50, 3.00
Double Rooms With Bath.....	3.50, 4.00, 4.50
Twin Rooms With Bath.....	5.00, 6.00

HOTEL COLUMBIA

75 or 100 Rooms

Single Rooms Without Bath.....	\$1.50, \$2.00, \$2.50
Double Rooms Without Bath.....	2.50, 3.50, 4.00
Single Rooms With Bath.....	2.50, 3.50
Double Rooms With Bath.....	4.00, 5.00

PARK-AMERICAN HOTEL

75 or 100 Rooms

Single Rooms Without Bath.....	\$1.50
Double Rooms Without Bath.....	2.00
Single Rooms With Bath.....	2.50
Double Rooms With Bath.....	4.00
Twin Beds With Bath.....	5.00

HOTEL RICKMAN

100 Rooms

Single Rooms Without Bath.....	\$1.75, \$2.00
Double Rooms Without Bath.....	2.50, 3.00, \$3.50
Single Rooms With Bath.....	2.50
Double Rooms With Bath.....	4.00, 4.50

OFFICIAL PROGRAM

112th Annual Meeting Michigan State Medical Society
September 13, 14, 15 and 16, 1932

OFFICIAL CALL

The Michigan State Medical Society will convene in annual session in Kalamazoo on Sept. 13, 14, 15, 1932. The provisions of the Constitution and By-laws and the official program will govern the deliberations.

CARL F. MOLL, *President*
B. R. CORBUS, *Chairman Council*
H. J. PYLE, *Speaker*

Attest:
F. C. WARNSHUIS, *Secretary*

MEETING PLACE

FIRST PRESBYTERIAN CHURCH HOUSE and
CIVIC AUDITORIUM
CHURCH HOUSE
Registration
Exhibits
House of Delegates
CIVIC AUDITORIUM
General Sessions
Combined Sectional Meetings

PROGRAM

The detailed program will appear in the September Journal. Please note that the program this year is a departure from former sessions. The individual sections will convene in the mornings.

In the afternoons all the sections will join

in a combined meeting in the Civic Auditorium. The speakers will be invited guests from out of the state. Their papers will be upon subjects of interest to every doctor and related to every branch of practice.

HOUSE OF DELEGATES

Speaker: Henry J. Pyle, Grand Rapids.
Vice-Speaker: C. E. Dutchess, Detroit.
Secretary: F. C. Warnshuis, Grand Rapids.

Sessions

Place: Auditorium, First Presbyterian Church House.
Time: Tuesday, September 13, at 10:00 A. M., 2:30 P. M., and 7:30 P. M.
Order of Business, Committee Reports and list of Delegates will be published in the September Journal.

General Meetings

Place: Civic Auditorium.
Time: Wednesday evening, 7:30 P. M., September 14.

1. President's Annual Address—President Carl F. Moll, M.D., Flint.
2. Address—Invited Guest.
3. Introduction of President-elect J. M. Robb, M.D., Detroit.
4. In Memoriam.

Second General Meeting

Place: Civic Auditorium.
Time: Thursday evening, 7:45 P. M., September 14.

1. Introductory Remarks.
2. "The Community's Responsibility to the Medical Profession."—Morris Fishbein, M.D., Editor of the Journal of the American Medical Association, Chicago.

CONDENSED DAILY SCHEDULE			
Tuesday (Sept. 13)	Wednesday (Sept. 14)	Thursday (Sept. 15)	Memorandum
10:00 A.M. House of Delegates	9:15 A.M. Section Meetings Medicine Surgery Gynecology and Obstetrics E. E. N. and T. Pediatrics Dermatology	9:15 A.M. Section Meeting Medicine Surgery Gynecology and Obstetrics E. E. N. and T. Pediatrics Dermatology	1. Registration: Church House 2. Scientific and Commercial Exhibits: Church House 3. Combined Meetings: Civic Auditorium 4. General Meeting: Civic Auditorium 5. House of Delegates: Civic Auditorium 6. Section Meetings: See Bulletin Board —o—
Afternoon	Afternoon	Afternoon	
2:30 P.M. House of Delegates	1:15 P.M. Combined Meeting [All Sections]	1:15 P.M. Combined Meeting [All Sections]	
7:30 P.M. House of Delegates	7:30 P.M. General Meeting President's Address	7:45 P.M. Public Meeting Morris Fishbein, M.D. Address	NOTICE Do not fail to visit Scientific and Commercial Exhibits in Church House. —o—

LOCAL COMMITTEES—ANNUAL MEETING—KALAMAZOO

Entertainment

Dr. John MacGregor, Chairman

Registration

Dr. John Koestner, Chairman

Hotels

Dr. W. G. Hoebeke, Chairman

History

Dr. Ralph Shook, Chairman

Auxiliary

Dr. Sherman E. Andrews, Chairman

Finance

Dr. C. E. Bennett, Chairman

Garages and Parking Spaces

Dr. Kenneth Crawford, Chairman

Commercial Exhibits

Dr. Hugo Aach, Chairman

Scientific Exhibits

Dr. Hazel Prentice, Chairman

Section Monitors

Medicine.....Dr. Stewart

Surgery.....Dr. Shackelton

Gynecology and Obstetrics.....Dr. Boys

Dermatology.....Dr. West

Ophthalmology and Otolaryngology

Dr. Fast and Dr. Fulkerson

Pediatrics.....Dr. Collins

SECTION PROGRAMS

Dermatology and Syphilology

Chairman: C. K. VALADE, Detroit.

Secretary: G. H. BELOTE, Ann Arbor

Wednesday, September 14, 1932

9:15 A. M.

Election of Officers.

"The Treatment of Malignant and Premalignant Dermatoses"—Dr. C. K. Hasley, Detroit.

The various accepted methods of treatment of malignant skin lesions will be discussed. Emphasis will be placed on their response to X-Ray and Radium treatment in hypermassive doses. A portion of the paper will be devoted to the electrocoagulation method of treating malignancies which have received insufficient radiation therapy by underdosage over prolonged intervals of time. The paper will be illustrated with lantern slides.

"A Review of the Treatment of Psoriasis by the Low Nitrogenous Diet"—Dr. R. C. Jamieson, Detroit.

A brief mention of the early studies regarding diet in psoriasis, particularly a low nitrogenous intake. The effect of a low nitrogenous diet alone or in combination with other methods of treatment upon the lesions of psoriasis. Results reported. Relation of nitrogen intake to endocrine metabolism—

particularly the pituitary. A brief discussion of whether an abnormal nitrogen intake can be only one of the many factors inducing a metabolic change resulting in psoriasis.

"The Management of the Treatment of Syphilis in General Practice"—Dr. George Van Rhee, Detroit.

Outline.

1. Introduction.

2. Drugs.

3. Dosage.

4. Patient.

A. Preparation.

a. Mental.

b. Economics.

c. Physical.

5. Scheme for Treatment.

A. Primary-Secondary.

B. Latent.

C. Prenatal.

D. Congenital.

"The Physical Therapy of the Commoner Skin Diseases"—Dr. H. J. Parkhurst, Toledo.

The forms of physical therapy of the commoner dermatoses, as usually employed by the general practitioner, will be mentioned and evaluated, and statistics from the author's practice will be cited in an attempt to point out the most successful and practical procedure for the treatment of each skin disease.

Wednesday P. M.

Combined meeting of sections.

Thursday, September 15—9:30 A. M.

Presentation and Discussion of a group of Dermatologic cases at the Health Service of the Western State Teachers College. Discussants will attempt to establish diagnoses and point out the most successful forms of therapy.

Clinic in charge of Doctors A. E. West, A. P. Biddle, U. J. Wile, R. C. Jamieson, C. K. Valade, H. L. Keim, H. S. Bartholomew, and Arthur Woodburne.

Thursday P. M.

Combined meeting of sections.

Gynecology and Obstetrics

Chairman: N. F. MILLER, Ann Arbor

Secretary: H. A. FURLONG, Pontiac.

First Day—September 14, 1932

9:00 A. M.

Chairman's Address—Dr. N. F. Miller, Ann Arbor, Michigan.

"Functional Disorders of the Ovary"—Dr. J. P. Pratt, Henry Ford Hospital, Detroit, Michigan.

Functional disorders of the ovary are more common than organic lesions. Diagnosis of the type and degree of disorders should pre-

cede therapy. Variations from normal functions are often difficult to determine. Menstrual irregularities are most easily observed indicators of the state of ovarian function. Classification of ovarian disorders is difficult. Results of treatment are compared.

"The Gynecological Symptoms in the Mal-adjusted Woman"—Dr. B. W. Mal-froid, Flint, Michigan.

In Gynecology today increasing emphasis is being placed on the influence of environment and social adjustments upon the emotional reactions of the patient. Changing social and economic conditions of modern life and their reflection in various physical signs and symptoms among women are discussed and illustrated with case reports.

"Prenatal Care and Its Importance"—Dr. Howard O. Brush, Port Huron, Michigan.

The importance of prenatal care and its newer aspects are stressed. Just what the obstetrician can hope to accomplish, especially in the prevention of toxemias, is given prime consideration.

"A Consideration of Puerperal Infection"—Dr. M. J. Lieberthal, Ironwood, Michigan.

The ever present hazard of puerperal morbidity and mortality warrants repetition and consideration of etiological factors as well as newer methods of treatment. A case report of a patient with unusual complications is included.

Second Day—September 15

9:00 A. M.

"Scopolamine Alone for the Relief of Pain During Labor"—Dr. L. E. Daniels, Detroit, Michigan.

The results of the use of scopolamine in five hundred labors for the production of amnesia and analgesia without morphine is discussed. The advantages and disadvantages over other common drugs are presented. Its effect upon the baby and mother, and its limitations are considered.

"The Use of Sodium Amytal and Avertin in Obstetrics"—Dr. W. C. Ellet, Benton Harbor, Michigan.

The use of sodium amytal and avertin, in the opinion of the author, has a proper and useful field in obstetrics. Without considerable contra-indications or dangers, it approaches closely the ideal obstetrical anesthesia. The apparent synergistic action of these two drugs is considered.

"Sodium Amytal and Pernocton in Obstetrics"—Dr. B. L. Lieberman, Detroit, Michigan.

The methods of administration and results from the use of these drugs during labor are discussed by the author. The drawbacks as well as the advantages are carefully considered.

Ophthalmology and Otolaryngology

Chairman: WILFRID HAUGHEY, Battle Creek

Secretary: H. O. WESTERVELT, Benton Harbor

Wednesday, September 14—9:30 A. M.

1. Chairman's Remarks. Dr. Wilfrid Haughey, Battle Creek.
2. "Prevention and Non-Surgical Treatment of Cataracts"—Dr. Alfred Dean, Grand Rapids.

The ophthalmoscope has been responsible for clearing up many of the early false conceptions of cataract, but it did not correct the etymology of the term. With improved technique and observation, cataracts have received a more definite classification. While it may commonly be considered as a result of senile degeneration, it is more often a secondary condition, resulting from local or systemic causes which might be prevented by observation of rules of hygiene and sanitation.

The location of the lens, with its source of nutrition and its duties, exposes it to early injury from internal and external causes, so that it may be one of the first tissues to manifest signs of pathology.

The slit-lamp has given us much valuable information that was beyond our reach with the ophthalmoscope, and gives its operator living material to study microscopically, and, as a result, local or systemic effects on the lens tissue are now recognized as producing a more or less characteristic picture.

Prevention is the treatment of choice, but if acquired opacities in the lens do develop, there is more to be offered the patient than a pair of glasses, or a cataract extraction at a later date.

Discussion—Dr. P. T. Grant, Grand Rapids.

Dr. H. H. Sanderson, Detroit.

3. "Retinal Lesions Encountered in Cardiovascular Disease"—Dr. George F. Suker, Chicago.

Discussion—Dr. George Slocum, Ann Arbor.

Dr. Don M. Campbell, Detroit.

4. Case Reports: "Tenonitis." "Dislocated Lenses." "Foreign Body in the Orbit." "Unilateral Spasm of the Accommodation"—Dr. Alexander R. McKinney, Saginaw.

1. Spontaneous extrusion of a foreign body (piece of cartridge shell), which had passed entirely through globe, lodging in the orbit.

2. Persistent dilatation of the pupil which was finally explained by discovering a very small foreign body in the globe. Extraction with magnet and recovery.

3. Dislocation of hypermature cataractous lens in the vitreous necessitating enucleation.

4. Dislocation of lens into anterior chamber in a high myope. Liquid vitreous. Extraction and recovery.
5. Suppurative Tenonitis, metastatic in origin. Staphylococcus albus. Enucleation with gold ball implant.

Discussion—Dr. H. B. Weinburgh, Lansing.

Dr. Wm. Edw. McGarvey, Jackson.

Wednesday, September 14, Dr. Suker will present a reel of Motion Pictures of a new Operation for Glaucoma which in his hands "has been very satisfactory in every detail."

Thursday, September 15, Dr. Lillie will show before our Section a four hundred foot reel of "Cataract Surgery in India" pictures, which he will describe.

LUNCHEON—12:00 M.

Round Table Conference: Dr. George F. Suker, Chicago.

"Ophthalmological Problems of Everyday Practise."

QUESTIONS DESIRED DISCUSSED MUST BE WRITTEN AND HANDED IN EARLY FOR DR. SUKER'S CONSIDERATION.

Thursday, September 15—9:30 A. M.

1. Case Presentations and Reports—Dr. Ralph B. Fast, Kalamazoo.

2. "Factors in Making the Diagnosis in Sinus Disease"—Dr. Millard F. Arbuckle, St. Louis, Missouri.

Discussion—Dr. H. Lee Simpson, Detroit.

Dr. Robt. Frazer, Battle Creek.

3. "The Clinical Significance of Retrobulbar Neuritis"—Dr. W. I. Lillie, Rochester, Minnesota.

Retrobulbar neuritis is a definitely established clinical entity, although the etiology is not always so readily revealed. Any case of retrobulbar neuritis is important enough to warrant a thorough search for any or all causes, inasmuch as it may be a prodromal phase of a serious ailment.

Retrobulbar neuritis may be either acute or chronic, depending upon the case. The chronic type is more readily overlooked both by the patient and the doctor, and is not so amenable to treatment. A large number of the acute type spontaneously get better, and one is apt to credit whatever form of treatment instigated as the curative agent.

The etiology of retrobulbar neuritis as revealed at the Mayo Clinic, and representative case histories of each group, are presented. The type of treatment and the end-results obtained in the different groups are summarized.

Discussion—Dr. Fred'k E. Grant, Kalamazoo.

Dr. John R. Rogers, Grand Rapids.

4. "Certain Rhinologic Aspects of Allergy"—Dr. Warren T. Vaughan, Richmond, Virginia.

Discussion—Dr. George L. Waldbott, Detroit.

Dr. Ferris N. Smith, Grand Rapids.

LUNCHEON—12:00 M.

Round Table Conference: Dr. Millard F. Arbuckle, St. Louis, Mo.

Dr. W. I. Lillie, Rochester, Minn.

"Eye, Ear, Nose and Throat Problems of Everyday Practise."

QUESTIONS DESIRED DISCUSSED MUST BE WRITTEN AND HANDED IN EARLY FOR DR. ARBUCKLE'S AND DR. LILLIE'S CONSIDERATION.

Surgery

Chairman: JOHN ALEXANDER, Ann Arbor.

Secretary: G. J. CURRY, Flint.

September 14, 1932—9:00 A. M.

1. "Intestinal Obstruction"—Dr. R. L. Mustard, Battle Creek.

Discussion—H. K. Ransom, A.B., M.D., Ann Arbor.

R. S. Morrish, B.S., M.D.

2. "Pre-Operative Care of Patient"—Dr. R. H. Baker, Pontiac.

Discussion—W. L. Finton, M.D., Jackson.

A. L. Arnold, Jr., M.D., Owosso.

3. "Post-Operative Care of Patient"—Dr. F. A. Collier, Ann Arbor.

Discussion—Geo. L. LeFevre, M.D., Muskegon.

G. Seibold, M.D., Jackson.

4. "Head Injuries"—Dr. H. E. Randall, Flint.

Discussion—M. M. Peet, M.A., M.D., Ann Arbor.

A. S. Crawford, B.S., M.D., Detroit.

5. "Empyema"—Dr. S. W. Harrington, Rochester, Minn.

Discussion—E. J. O'Brien, M.D., Detroit.

Clyde I. Allen, Detroit.

Morning, Dry Clinic

September 15, 1932—9. A. M.

1. "Diagnosis and Treatment of Goiter."—Dr. C. E. Boys, B.Sc., Kalamazoo.
2. "Important Little Things in the Treatment of Anal Diseases"—Dr. L. J. Hirschman, Detroit.
3. "Amputations, with Particular Reference to Preparation of the Stump"—Dr. C. E. Badgley, Detroit.
4. "New Methods of Relieving Prostatic Obstruction"—Dr. Reed Nesbit, Ann Arbor.
5. "Management of Colles Fracture"—Dr. Grover C. Penberthy, Detroit.

General discussions on each paper lasting three minutes.

General Medicine

Chairman: RICHARD M. MCKEAN, Detroit.

Secretary: IRVING W. GREENE, Owosso

September 14—9:15 A. M.

1. Chairman's Address—"Diabetes and Tuberculosis"—Dr. Richard M. McKean, Detroit, Michigan.
2. "New Concepts in the Treatment of Diabetes"—Dr. L. H. Newberg, Ann Arbor, Michigan.
3. "Nephritis"—Dr. Floyd H. Lashmet, Ann Arbor, Michigan.
4. "Arteriosclerosis and Hypertension"—Dr. C. G. Jennings, Detroit, Michigan.
5. "Treatment of Acute Coronary Thrombosis"—Dr. Samuel Levine, Boston, Massachusetts.

September 15—9:15 A. M.

1. "Arthritis"—Dr. Joseph Miller, Chicago, Illinois.
2. "Migraine, Particularly as an Allergic Manifestation"—Dr. Warren Vaughn, Richmond, Virginia.
3. "Neurological Diagnosis"—Dr. Carl Camp, Ann Arbor, Michigan.
4. Joint Meeting with the Surgical Section Clinical Pathological Conference under direction of
Dr. Cyrus C. Sturgis, Ann Arbor, Michigan.
Dr. Plym Morse, Detroit, Michigan.

Pediatrics

Chairman: T. D. GORDON, M.D., Grand Rapids

Secretary: CAMPBELL HARVEY, M.D., Pontiac

First Session

Wednesday

September 13

1. 9:00 to 9:30—N. W. Larkum, M.D., Lansing—Bacteriophage
2. 9:30 to 10:00—D. J. Barnes, M.D., Detroit—Cod Liver Oil Concentrates
3. 10:00 to 10:45—C. M. Spooner, M.D., Toronto, Ont.—Anomalies of the Genito-urinary Tract in Children
4. 10:45 to 11:30—Francis E. Senear, M.D., Chicago—Infantile Eczema
5. Open

Second Session

September 14

1. 9:00 to 9:15—Election of officers
2. 9:15 to 9:45—President's Address—T. D. Gordon, M.D., Grand Rapids, Mich.—The Relation Between Cerebral Diplegia and Birth Injury
3. 9:45 to 10:30—A. U. Desjardins, M.D., Mayo Clinic—Therapeutic Radiology in Relation to Infancy and Childhood
4. 10:30 to 11:00—W. J. Wilson, M.D., Detroit—Congenital Heart Disease with Reports of Cases
5. 11:00 to 11:30—Barnes, M.D., Dept. of Pediatrics, Ann Arbor—Behavior Problems in Childhood.
6. 11:30 to 12:00—Reserved for Pediatrics Dept., Ann Arbor

COMBINED SECTION MEETINGS

Civic Auditorium

Wednesday, September 14—1:15 P. M.

- "Diagnosis and Management of Premature Detachment of Normally Implanted Placenta"—Fred Falls, M.D., University of Illinois, Chicago.
- "Treatment of Varicose Veins"—Eugene A. Osius, M.D., Detroit.
Miln C. Harvey, M.D., Detroit.
- "Mammary Neoplasms"—R. R. Smith, M.D., Grand Rapids.
- "Allergy in Medical Practice"—Dr. Warren Vaughan, Richmond, Va.
- Talking Motion Pictures: "Cardiac, Vaso-motor and Respiratory Phenomena"; "Signs and Symptoms of Raised Intracranial Pressure."
(Courtesy Petrolagar Laboratories)
- No Discussions During Afternoon Sessions.

Thursday, September 15—1:15 P. M.

"Otitis Media"—Millard F. Arbuckle, M.D.,
St. Louis, Mo.

"Methods Employed in Birth Control"—
E. J. Mastner, M.D., New York City.

"Posture"—Joel E. Goldthwait, M.D., Bos-
ton, Mass.

Talking Motion Pictures:

"Maggot Treatment for Chronic Osteomye-
litis"

(Courtesy Petrolagar Laboratories)

HONORARY MEMBERS MICHIGAN STATE MEDICAL SOCIETY

Name	Address	City	County	Elected
Barnett, G. G.		Ishpeming	Marquette	1930
Bonning, Carl	186 Edison Ave.	Detroit	Wayne	1914
Cameron, Duncan A.		Alpena	Alpena	1931
Clark, John E.	62 W. Adams Ave.	Detroit	Wayne	1926
Dodge, Wm. T.		Big Rapids	Mecosta	1927
Doudna, J. F.		Lake City	Tri	1931
Ennis, C. J.		Sault Ste. Marie	Chippewa	1928
Felch, T. A.	Sellwood Block	Ishpeming	Marquette	1926
Godfrey, Willoughby L.	Eldred Block	Battle Creek	Calhoun	1929
Haughey, Wm. H.	24 Poplar St.	Battle Creek	Calhoun	1928
Hoyt, E. A.	1207 Broadway	Bay City	Bay	1930
Hume, A. M.		Owosso	Shiawassee	1929
MacLaren, A. D.	203 Huron Ave.	Port Huron	St. Clair	1927
McCallum, Geo. B.		Monroe	Monroe	1930
Miller, Robert E.	Tussing Bldg.	Lansing	Ingham	1926
Nyland, Albertus	800 Kalamazoo Ave.	Grand Rapids	Kent	1928
Platt, J. S.		Port Huron	St. Clair	1931
Quick, Paul A.	Landreth Block	Muskegon	Muskegon	1926
Reed, Wilbur F.		Cheboygan	N. Michigan	1931
Rockwell, A. H.	228 Douglas Ave.	Kalamazoo	Kalamazoo	1927
Rogers, Fred W.	811 Francis St.	Jackson	Jackson	1931
Roller, L. A.	446 Paris Ave.	Grand Rapids	Kent	1931
Rozema, Simon L.	425 Eastern Ave. S.E.	Grand Rapids	Kent	1931
Sample, Chester H.	408 2d Nat. Bk. Bldg.	Saginaw	Saginaw	1931
Smith, Eugene	62 W. Adams Ave.	Detroit	Wayne	1926
Spencer, Ralph H.	228 Charles St.	Grand Rapids	Kent	1926
Stoddard, John A.	Old Peoples Home	Muskegon	Muskegon	1926
Switzer, G. O.	127 N. James St.	Ludington	Mason	1931
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Wasson, C. B.		Bellevue	Eaton	1929

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CONTENTS

112th Annual Meeting Michigan State Medical Society at Kalamazoo, September 13, 14, 15 and 16, 1932.....	509	Michigan's Department of Health. C. C. Slemmons, Dr.P.H., M.D.....	542
Official Program	519	Editorial:	
The Embryohormonic Relations of the Endocrine Glands. Part 1. R. C. Moehlig, M.D. 525		Medical Ethics vs. Business Ethics.....	545
Ascaris Lumbricoides Infestation in Children in Oakland County. Harold R. Roehm, M.S., M.D.	531	A New Way of Slendering.....	546
Omphalocele Congenitalis. J. Whitlock Gordon, M.D.....	533	Wayne County Medical Society.....	546
Vincent's Angina. Aaron A. Farbman, M.A., M.D., and J. C. Danforth, M.D.....	535	Fears	546
Intraperitoneal Therapy. R. Wallace Teed, A.B., M.D.	537	The Horns of a Dilemma.....	547
Bilateral Optic Neuritis and Electric Retinitis. Ray W. Hughes, M.D.....	538	Higher Education	547
Gall-Bladder Disease and Diabetes. C. D. Brooks, M.D., F.A.C.S., William R. Clinton, M.D., F.A.C.S., and L. Byron Ashley, M.D., F.A.C.S.	539	Overproduction	547
		A Bit of Medical History.....	547
		Medical Economics: Medicine Today and Tomorrow	552
		Communications	553
		General News and Announcements.....	554
		Society Activity	555
		County Societies	556
		Woman's Auxiliary	557
		The Doctors' Library.....	558

THE EMBRYOHORMONIC RELATIONS OF THE ENDOCRINE GLANDS

I. THE EMBRYOHORMONIC RELATIONS OF THE THYROID GLAND TO ECTODERMAL TISSUES

R. C. MOEHLIG, M.D.*†
DETROIT, MICHIGAN

This series of articles will deal with the embryohormonic relations of the endocrine glands. By embryohormonic control is meant the capacity of particular endocrine organs to regulate certain tissues according to their embryological origin.

The present article will discuss the embryohormonic relations of the thyroid gland to ectodermal tissues.

It is interesting to note the rapid progress made in the study of the thyroid gland function. Some years ago a diagnosis of hypothyroidism required the presence of all the cardinal signs and symptoms, which is in contrast to our present-day diagnosis. The

same is true of hyperthyroidism. This progress is due to our increasing knowledge of glandular physiology.

There are certain reasons why a disturbed function of the same gland will reveal itself with varying symptoms in two individuals.

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†Dr. Moehlig was graduated from the Detroit College of Medicine in 1913. He was interne at Harper Hospital, Detroit from 1913 to 1915 and is Junior attending physician at Harper Hospital at the present time. His specialty is Internal Medicine.

Of prime importance is the factor of constitutional inheritance. The individual inherits to a certain degree his glandular activity. His inheritance also determines the predominant and recessive characteristics of certain tissues under glandular control. The problem resolves itself into: Do the glands of internal secretion determine the constitutional inheritance? Both exogenous and endogenous influences affect glandular function. It is reasonable to suppose that a long standing exogenous or endogenous factor which exerts its influence over many generations will produce bodily changes or mutations of form and function. Darwin's studies on the origin of man assume greater significance in the light of our newer endocrine knowledge.

Another important factor showing why individuals having the same glandular disturbance present different manifestations is the quantitative difference of glandular pathology.

The almost countless combinations possible between male and female chromosomes show why certain tissues bear the brunt of the pathology in glandular disturbances.

The greatest difficulty which endocrinologists have encountered is the interglandular relationships.

It is apparent that no endocrine disease is monoglandular but always pluriglandular. The primary pathology may begin in one gland but always involves other glands secondarily.

The whole problem of interglandular relationships is made much simpler by embryology. These embryohormonic relationships provide a clear, distinct and intelligible hypothesis of endocrine interrelationships.

The chemistry of glandular interrelationships is no doubt very complicated and difficult to follow and we must look to the physiological chemists to solve these.

How intricate and complicated a process is the chemistry and how closely allied are the various endocrine functions is well illustrated by bone formation. We know that the parathyroids influence bone development through the control of calcium metabolism. The thyroid gland influences bone development as seen in hypothyroidism. We will see how this is accomplished elsewhere in the paper.

The unquestioned control which the pi-

uitary exercises over skeletal development shows the necessary correlation of endocrine gland function.

It is evident that there must exist a very delicate and necessarily intimate correlative interglandular function forming an interlocking mosaic pattern. To determine minutely each glandular function requires a dissection of this mosaic pattern into its structural elements. This is where embryology serves a most useful purpose and provides the pivot upon which the whole problem revolves. Enthusiasm for this viewpoint is found in its increasing acceptance here and abroad. Its basic principles provide a most reasonable and logical understanding of pluriglandular involvement of endocrine diseases.

It must be realized that the many quantitative differences in glandular pathology accounts for the varying picture seen in different individuals. For example, it has been noted that certain individuals with proven (autopsied) pituitary involvement have a polycythemia, whereas others do not present this finding. Until we accept these quantitative glandular changes and constitutional tissue differences, we cannot make the necessary progress.

Today, we are able to foretell with some degree of accuracy an individual's disease predisposition. As Bauer says: "An individual disease predisposition may be constitutional, conditional or combined. The following examples illustrate this: An individual with a long, small thorax and large lungs, has a greater chance, all things being equal, of becoming ill with a progressive pulmonary tuberculosis than an individual with a broad, short thorax and small lungs in that he possesses, through the medium of his inheritance, a constitutional predisposition to pulmonary tuberculosis. An individual who has just had measles or whooping cough is, all things being equal, in more danger of contracting tuberculosis than one who has not just had this. There is, therefore, with this a conditional disposition to tuberculosis. If such an individual is narrow-chested and has an especially long lung, then he possesses a combined constitutional and conditional disposition to pulmonary tuberculosis. He is, therefore, on the basis of his constitutional type, in greater danger of contracting this disease."

It is obvious that only the basic principles

upon which this embryohormonic control is founded can be outlined here. The applications of these principles are so far reaching that they involve all fields of medicine.

It is usual to ask for experimental evidence to support an endocrine theory and rightly so. Nature has performed these experiments for us and the truth of these principles has been ascertained by postmortem verification. It must be realized that there is a vast difference in the constitutional make-up and reactions of various animals as compared with humans. Rats, for instance, do not react with a polycythemia after bilateral adrenalectomy, whereas dogs do.

I do not wish to imply that experimental work has not verified the embryological principles for, indeed, it has aided it immensely. My point is that the human being is our best experimental laboratory and furnishes us with known facts. The truth of the embryological principles is found in the pathological findings of humans.

What important and diverse actions the various glands produce will readily be seen if the embryohormonic relations of the glands are studied. It is quite impossible in these articles to take up the many sided phases of medicine which these principles are applicable to.

What a vast field of research these embryohormonic relations of the endocrine glands open up!

Without entering into any speculation, it must be evident to everyone that herein lies the most fertile field of neoplastic research. Since these embryohormonic principles were outlined in 1914, it has been gratifying to see that experimental and clinical research has added a host of data to support it.

First will be considered the embryohormonic relations of the thyroid gland to ectodermal tissues. It is to be definitely understood that the embryological origin of the endocrine gland is not the criterion for its selective action. For example, the pituitary gland is derived from the ectoderm but it does not have a selective action on ectodermal tissues. That the thyroid gland function is a most important one is evidenced by the fact that it is genetically one of the first organs to be developed in the embryo, its anlage already being present in the third week of embryos of 18 vertebræ.

The *thyroid gland*, an entodermal derivative, has a selective action on *ectodermal tissues*.

The ectodermal tissues are:

Skin (epidermis—in contrast to corium)

Hair shaft

Nails

Sebaceous and sudorific glands

Mammary glands

Enamel of teeth

Eye (with the exception of the supporting and vascular layers such as the sclera, choroid, stroma of iris, etc.)

Auditory organ proper

Central nervous system

Sympathetic nervous system

Adrenal medulla

Olfactory organ

Pituitary gland

The best proof of the thyroid gland's selective action is seen in congenital deficiency of this gland's secretion, resulting in the disease cretinism. Naturally the development of the ectodermal tissues must, if the principle be correct, show marked developmental and functional defects. Clinically and pathologically we find this to be true.

It must be realized that since the thyroid influences the development of all ectodermal structures, which includes the pituitary, it will through this latter gland also influence mesodermal structures. This makes the problem somewhat difficult for it must be realized that congenital athyreosis results in a congenital hypopituitarism with its consequent mesodermal underdevelopment. But for this very reason, we are able to understand the interlocking correlative function as expressed in tissue development. Congenital hypothyroidism or cretinism illustrates the ectodermal defects.

Skin (sebaceous and sudorific glands, nails, hair shaft, lens of eye, conjunctiva, etc.)

The peculiar appearance of the skin seen in cretinism is well known. The edematous appearance is a great aid in diagnosis. The skin is very dry and scaly. The sebaceous and sudorific gland function is very much decreased so that these individuals do not sweat and the skin has very little sebaceous secretion. The consequence of this is that we see many dermatological conditions as a result of lessened thyroid secretion. The increased resistance of the skin to electrical stimuli is also found. The chemical influence of the thyroid on skin is recognized and is well illustrated in myxedema. Delay of absorption from the skin is found in

myxedematous individuals (Eppinger). In thyroidectomized animals Luithlen found retardation of healing of the skin.

Schlagenhauser and Wagner v. Jauregg studied the skin of goats on whom thyroidectomy had been performed in the first few months of life. They found a mucin-like substance in the epidermis. In some parts there was edema. There is no question that the thyroid influences, by its secretion through chemical means, the epidermis.

Hair.—Before showing the hair involvement, it would be well to give a very brief review of hair development. This is necessary because the ectodermal and mesodermal portions are seemingly inseparably associated. It is to be noted again, however, that the thyroid affects specifically the *ectodermal* cells, not the mesodermal cells, the latter being influenced by the pituitary.

Hairs are derived from thickening of the epidermis. "The first evidence of a hair anlage is the elongation of a cluster of epidermal cells in the inner germinal layer. The bases of these cells project into the corium and above them cells of the epidermis are arranged parallel to the surface. The elongated cells continue to grow downward until a cylindrical hair anlage is produced. This consists of an outer wall, formed of a single layer of columnar cells continuous with the basal layer of the epidermis. This wall bounds a central mass of irregularly polyhedral epidermal cells. About the hair anlage the *mesenchyma* forms a sheath and at its base a condensation of mesenchyma produces the anlage of the *hair papilla* which projects into the enlarged base of the hair anlage. As development proceeds, the hair anlage grows deeper into the corium and its base enlarges to form the hair bulb. The hair differentiates from the based epidermal cells surrounding the hair papilla. These cells give rise to a central core which grows toward the surface, distinct from the peripheral cells which form the outer sheath of the hair. The central core of cells becomes the inner hair sheath and the shaft of the hair." (Prentiss and Arey's Embryology.)

Briefly stated, then, the central shaft and bulb is *ectodermal* and influenced by the state of the thyroid gland whereas the hair papilla and outer sheath are *mesenchymal* in origin and as we shall see in the next article are influenced by the pituitary gland.

We shall likewise see in this article that

the thyroid gland influences the ectodermal pituitary showing how well nature correlates the various functions and structures. The point I wish to make here is that, since the ectodermal hair shaft is influenced by the thyroid, it would seem logical to suppose that there must be a mechanism present to affect the allied nutritional part of the hair, the mesodermal hair papilla, and this is brought about by the thyroid's effect on the pituitary. It is evident then that there must be an intimate correlative function among the endocrine glands themselves.

In hypothyroidism the hair of the head may be absent and when present is dry, brittle and sparse. In severe congenital hypothyroidism, the scalp may be covered merely with lanugo. The hair of the eyebrows, shins, crines pubis and axillary hair is very sparse and not infrequently is almost absent so that the individual presents a bizarre appearance. The eyelashes are short and even absent. This type of case responds very well to thyroid extract as amply proven by many. It is evident that the thyroid does influence the development of the hair and that suffices for our present purpose. In the article on the pituitary will be shown the pituitary's influence on the mesodermal hair papilla.

Nails.—The nails in hypothyroidism are often non-developed. This is particularly true of cretinism. In myxedema, they are lustreless, brittle and striated. The nails grow very slowly in these cases and are usually very small.

Janney and Henderson state that in at least eighty per cent of hypothyroid cases the nails suffer. The first changes are increased softness and brittleness so that complaint is made of sensitiveness of the finger tips. As Janney says, in severe cases they may become paper-thin or, rarely, be shed. The lanulae may be deficient and white spaces appear on the matrix. He says, "It is surprising how little attention is paid to these straws which show how the wind is blowing."

Heller has reviewed the literature in regard to the nail changes found in endocrine disturbances and he found that the thyroid and parathyroid disturbances cause the greatest changes. Interesting is the fact that thyroidectomized sheep and goats lose their horns.

Enamel of Teeth.—It is necessary to state

that the enamel of the teeth is derived from the ectoderm, whereas the dentin and cementin are derivations of the mesoderm. The enamel of the teeth in congenital hypothyroidism is defective. It is interesting to note that congenital goiters with hypothyroidism will show very definite enamel defects. Unfortunately, dentists ascribe it to the diet, and, while the question of diet is important, nevertheless the state of the thyroid and other endocrine glands is all-important. To be sure, wrong diets through the intermediary action of the endocrine glands do influence various tissues but the importance of the glands is often lost sight of.

Thyroidectomized animals often lose the enamel of the teeth.

In the literature are many reports concerning hypothyroidism and defective enamel development.

Mammary Gland.—The mammary gland, being a modified sweat gland and ectodermal in origin, is influenced like the sudorific glands elsewhere. In congenital hypothyroidism, the lacteal tissue of the mammary gland is poorly developed. In young thyroidectomized animals, the mammary ridge fails to develop. Thyroid disturbances frequently manifest themselves in the mammary gland. This relationship between thyroid and mammary gland is well known.

In hyperthyroidism, due particularly to adenomatous goiter, adenoma of the mammary gland is not infrequently found. Ballin and I, as well as others, called attention to the simultaneous occurrence of tumors in the thyroid, uterus and breast. Mastitis is frequently seen in thyroid disturbances and the physiological swelling of the breasts and thyroid preceding and during menstruation suggests the relationship between these two glands.

Eye.—The eye with the important exception of the vascular and supporting tissues (sclera, choroid, ciliary body, stroma of iris, etc.) is ectodermal in origin. It is most important to keep the origin of the various layers in mind.

In athyreosis and hypothyroidism, affections of the ectodermal derivations are common.

Again the relationship of the thyroid to the nervous system becomes apparent in the ectodermal nervous elements of the eye. Congenital lack of thyroid secretion is often

reflected in the maldevelopment of the ectodermal tissues of the eye.

Zentmayer says that young thyroidectomized animals have maldevelopment of the uveal tract and are often totally blind.

Conjunctivitis (non-infectious type) is frequently found in hypothyroidism. Therapeutically, thyroid extract actually cures these cases. This naturally is important for ophthalmologists.

Auditory Organ.—The auditory organ proper is derived from the *ectoderm* whereas *mesenchyme* surrounds the labyrinth.

It is a well known fact that thyroid insufficiency results in various degrees of auditory underdevelopment and consequent deafness. Leicher described these auditory defects in his book on internal secretions and ear disturbances.

Scholz found that 29 per cent of cretins were deaf mutes and 32 per cent hard of hearing. Leicher says this percentage is too low. The pathological changes in the auditory organ in congenital hypothyroidism are many and diverse. Atrophic changes in the organ of Corti and ganglion cells are described. Of course much depends upon the time of life at which the hypothyroidism sets in as well as upon the degree of severity.

In 1927, I reported twenty-four cases of hypothyroidism associated with deafness and vertigo. Eighteen of these who had not gone on to total deafness were improved by thyroid extract. Barlow, Drury and others have called attention to the thyroid and hearing defects.

The reader is referred to Leicher's and also to Alexander's works, which give the pathological findings of cretinism in detail.

Central Nervous System.—The brain and nervous system in general is derived from the ectoderm. The pia mater, arachnoid, dura mater, etc., are mesodermal in origin. Here we see a very obvious and at the same time most important relationship between thyroid secretion and the central nervous system. How far reaching this fact is must be realized when the whole mental and psychic makeup of an individual is dependent upon his thyroid function. Lack of thyroid secretion, congenital in origin and of a severe degree, results in idiocy. Lesser degrees of course produce lesser degrees of mental changes.

The pathological-anatomical changes pres-

ent in the central nervous system in athyreosis and hypothyroidism are varied and diverse. Broadly stated, it may be said that congenital lack of thyroid secretion results in severe degrees of psychic changes based upon anatomical cerebral pathology. It is especially important for the growing child. The earlier hypothyroidism is recognized in infancy, the greater will be the benefits of thyroid therapy. From this, we see that feeding of thyroid extract to goiterous mother during pregnancy is of greatest benefit to the child. This is truly preventive medicine.

If hypothyroidism is recognized late in childhood, the less influence will thyroid therapy have on mental development.

As further proof of the thyroid influence on brain development are the findings of DeBiasi, who found a complete absence of the thyroid in cases of anencephalus.

If this physiological relationship between the thyroid and central nervous system was recognized oftener by psychiatrists, there would be less tendency to diagnose functional conditions. Many hyperthyroid patients, because of their emotional instability, are treated as psychoneurotics, which they are, but with definite pathological foundation.

An extended discussion of this most important relationship is not the purpose of this paper but merely to show the important physiological relationships between thyroid and the ectodermal nervous system.

Sympathetic Nervous System and Adrenal Medulla.—The relationship between the sympathetic system, adrenal medulla and thyroid is a very close one. Generally speaking, the vast amount of clinical and experimental data shows that the sympathetic system parallels the function of the thyroid.

Athyreosis is accompanied by an aplastic adrenal medulla.

That changes are also found in the adrenal cortex is well understood by the accompanying pituitary involvement found in athyreosis with its concomitant adrenal cortex hypoplasia.

Hammett found the adrenals of rats smaller after thyroparathyroidectomy.

It is well known that the hypothyroid individual has a greater tolerance for epinephrine than normal whereas in hyperthyroidism the reverse is true.

Pituitary Gland.—The relationship between the thyroid and pituitary gland is a

most important one and must be emphasized so that a clear understanding of this hormonal correlation is provided. This becomes the keynote of embryohormonic relationships and goes far towards clearing up many obscure points in endocrine correlations. The involvement of the ectodermal pituitary glands results in secondary mesodermal tissue involvement, not, however, to the extent seen in primary pituitary disease. It depends also, among other things, upon the extent of the pituitary changes. Likewise, it must be remembered that the age at which the hypothyroid function sets in is important, for if this takes place *after* puberty, when the sexual glands are active, a somewhat different reaction of the pituitary takes place.

As will be shown in other articles, the corpus luteum of the ovary and the interstitial cells of the testicle are antagonistic to the pituitary and act as a balance wheel to its function. Thus animal experiments, as well as human studies, may vary as to the size of the pituitary in hypothyroidism, depending upon the sexual development of the animal.

Again congenital hypothyroidism or athyreosis are the most useful clinical examples showing the thyroid's influence on pituitary development.

It has previously been stated that the thyroid gland is, genetically speaking, one of the first organs to be developed in the embryo, its anlage already being present in the third week of embryonic life.

Genetically, the pituitary is also developed early (3 mm.), as would be expected, since its function is to influence the mesodermal tissues.

With the foregoing facts in mind it is not surprising, therefore, that the opinions concerning the state of the pituitary in hypothyroidism are diverse. An analysis of the assembled opinions shows that some say that the pituitary is smaller after thyroidectomy and others say that it is enlarged.

Information concerning the pituitary function in hypothyroidism is best obtained from *congenital* hypothyroid conditions as well as the clinical signs and symptoms.

It has also been found that in anencephalus anomalous development of the pituitary is present. For instance, Covell, studying thirty-two cases of anencephalus, concluded that the pars nervosa was lacking in the ma-

jority of cases, the remainder of the gland showing many developmental defects.

The ectodermal neural lobe suffers as severely as the rest of the ectodermal nervous tissue in anencephalus.

With the definite knowledge that the thyroid gland influences the development of the ectodermal nervous system (brain, etc.), it is only logical to assume that the neuro ectodermal posterior lobe should be either absent, deformed or underdeveloped in congenital hypothyroidism.

Gradations of involvement of the ectodermal pituitary are, therefore, dependent upon the degree of congenital hypothyroidism and represent a hypofunction of the pituitary accompanying hypothyroidism.

Clinically, we find this to be true. Congenital hypothyroidism shows that the pituitary function is reduced. We note, for instance, that the mesodermal bones are retarded in development, likewise the sex

glands—merely to mention two outstanding signs.

Another important fact is that the size of the gland is not necessarily the criterion of its function. Severe hypothyroidism is frequently seen in conjunction with large colloid goiters.

In summary, we may say that the thyroid secretion influences the ectodermal pituitary gland.

SUMMARY

The endocrine glands are intimately linked with the constitutional development of an individual.

Embryology supplies the keynote to interglandular relationships.

The embryohormonic relations of the thyroid gland to ectodermal tissues furnishes a reasonable explanation of thyroid function.

ASCARIS LUMBRICOIDES INFESTATION IN CHILDREN IN OAKLAND COUNTY

HAROLD R. ROEHM, M.S., M.D.†
BIRMINGHAM, MICHIGAN

Ascaris lumbricoides infestation of the intestinal tract in children apparently has not been common in Michigan, as I am unable to find any reports on the subject. Weller¹ says that he very seldom sees the worm. Cowie² says that while occasionally a case is seen in the clinic, neither he nor Parsons has seen any in private practice, but recently several communications concerning ascaris have been received and one infestation of thirty-nine worms has been reported to him. Young³ states that occasionally ova of ascaris are found in stool examinations at the State laboratory.

Such infestations must be present because of the ubiquity of the parasite, which has been found infecting human hosts from Finland and Greenland to South Africa. Available tables⁴ of human infestation showed a frequency of 1.29 for New York City in 1920, and 1.96 for Chicago in 1906. I have found none for Detroit or Michigan and what the present percentage of frequency may be I do not know.

The classic signs popularly supposed to be pathognomonic of intestinal parasites in

general, and most frequently discussed by the mothers of children, are picking the nose and grinding the teeth. That these signs were also once regarded as characteristic by members of the medical profession may be verified by consulting texts of pediatrics of not more than twenty years ago. The excellent recent work of Keller⁵ et al. has shown the fallacy of the nose and teeth syndrome. They found most characteristically, disturbed sleep, abdominal discomfort, abdominal protruberance and eosinophilia in the majority of white patients, but that any or all of these symptoms and signs may be absent.

The diagnosis of ascaris infestation rests upon demonstration of the worm or its eggs

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in the feces of the patient, or of the worm in the intestinal tract of the patient, according to the X-ray method carried out by Archer and Peterson.⁶ This latter method is necessary only when no female worms are present and therefore no eggs are to be found in the stools.

A brief review of the literature on the subject of ascariasis will convince the reader that the infestation is a latent source of much pathology, aside from the distress caused simply by the presence of the worms in the intestine. Three cases are given of fatal strangulation from migration of the worms up to the digestive tract and thence to the larynx. *Ascaris* have been found in almost all of the body and organ cavities, including the mastoid and heart. The worm substance is capable of producing a general sensitivity in the human. By sheer mechanical means a mass of worms may produce intestinal obstruction or a single worm may occlude the common duct.

The possible sources of infection in Oakland County are probably less in number than in those districts in the southern states where the infestation is heavy and where the percentage frequency may be as high as 82.7 per cent⁷ for certain localities. The common source is, of course, soil polluted with feces of humans or pigs, or drainage water from such soil. Simpson⁸ suggests that the popular fad of feeding children raw vegetables, many of which are shipped from the south, may account for one source. Smithies⁹ says, "If patients definitely can be shown to be raw vegetable eaters, and that these vegetables have come from the south, one might incriminate such food. One must remember, however, that locally grown vegetables, particularly 'garden truck,' grown by careless and infected foreigners, may carry infestation quite as well as imported foods. Mature *ascaris* ova may remain alive for years."

Yoshida¹⁰ states that he has very often found on the leaves of lettuce, cabbage, and celery, viable *ascaris* eggs which stuck so firmly that the usual amount of washing did not remove them.

My interest in this subject has been stimulated by the fact that in the past four months three mothers have come to my office each bearing a mature specimen of *ascaris lumbricoides* wrapped in paper and each with the story that the worm had been passed by her child a few minutes previous-

ly. The first child, Tommy W., had lived in Canada for the sixteen months previous to June, 1931, and had been living in Oakland County three months when the first worm was passed. He was a strong, sturdy boy, aged two and one-half years, with nothing to suggest the infestation. Upon treatment he passed four more worms and subsequent stool examinations failed to reveal *ascaris* ova. The second child, Laura R., had always been a light sleeper but showed no abnormalities. One worm was spontaneously passed and subsequent stool specimens failed to show *ascaris* ova. The third child, Marian S., had had her stool examined for *ascaris* ova six months previous to the spontaneous passage of a worm, with negative results. Only one worm was passed and the stools on subsequent examination showed no ova.

Six weeks following negative stool examinations of these three cases X-rays were taken of the intestinal tract of each child after the technic of Archer and Peterson.³ X-rays of all three were negative. It may be said with reasonable definiteness that two of these children had had only one worm each in their intestinal tracts. This is, of course, unusual, but points to the probability that the infestation was from a transient source such as food, and that only one viable egg was ingested.

These three cases indicated to me the advisability of routine stool examination in all patients. With the coöperation of Dr. C. C. Young of the State Laboratories, the Laboratory of the Oakland County Board of Health and the Laboratory of the St. Joseph's Hospital at Pontiac, one hundred and seventy-one stools have been examined from children in Bloomfield, Southfield and Royal Oak townships. The only positive for *ascaris* was the first case, Tommy W. The other two cases were found because each passed a live worm. Stool examinations of these two have since been consistently negative. Three other parasitic infestations, one *Oxyuris vermicularis*, one *Giardia intestinalis*, and one *Chilomastix mesnili*, were incidentally found in the routine examinations.

SUMMARY

One hundred and seventy-one stool examinations have been made. These specimens

were obtained from children of families of widely varying circumstances. One patient was found to have five worms and numerous eggs. Two patients each passed one live worm and their stools were afterwards consistently negative for ova. These three cases following negative stool examinations were all examined by X-ray, using Archer and Peterson's technic, and were all found negative. All three of these cases are private patients with good home care and surroundings.

The percentage frequency of ascaris infestation in this series of examinations was 0.58+ per cent in so far as stool examination demonstrated the infestation and 1.75+ per cent in regard to the actual demonstration of the living ascaris. It is acknowledged that the series is so small that these figures have little value.

CONCLUSIONS

Ascaris lumbricoides infestation of the intestinal tracts of children is endemic in Oakland County, though the incidence is low.

Routine examination of stools of children living in Michigan for intestinal parasites is a justifiable procedure.

The feeding of raw vegetables to children may be responsible for parasitic intestinal infestations, and single worms, as in Cases 2 and 3, may well have come from such a source, since their home surroundings are such as to make other sources unlikely.

The assistance of C. H. Benning, M.D., in the collection of stool specimens is gratefully acknowledged.

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OMPHALOCELE CONGENITALIS

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Omphalocele congenitalis or congenital umbilical hernia, strictly speaking, is not a hernia; in this condition, as pointed out by Malgaigne, the viscera have never entered the abdominal cavity. As early as 1691 Ruysch called attention to the fact that an umbilicus is not developed in these cases. The condition is really the persistence of the viscera to remain extra-abdominal due to the maldevelopment of the embryo. It is spoken of as a hernia frequently only because from a surgical standpoint it is customary to do so.

Omphalocele congenitalis is a fairly rare condition, occurring according to Saunders one in 5,000 or 6,000 cases in which all the intestines are found in the sac; when the abdominal contents are found with the intestine such as the liver or bladder it is twice as rare, occurring once in 10,000 cases. Bushan collected sixty-nine cases in the literature; forty-three were in the males and twenty-six in females. Hertsfeld collected sixteen cases, of which twelve had associated with them, cleft palate four cases; fissure of bladder five cases; pubic fissure three cases; spina bifida four cases; cerebral hernia one

case. Among other deformities reported accompanying omphalocele congenitalis are absence of cranial vault, anencephaly, club-foot, hare-lip and hypospadias.

Omphalocele congenitalis may be divided into two types, the embryonic and the fetal. The embryonic type is due to failure of development of the abdominal wall and the hernia or rather evagination may be very extensive, containing, besides intestine, also stomach, liver, or heart. In the embryonic type the fetus is usually stillborn or dies so soon after birth so that little chance for repair of the defect by surgical means is afforded.

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The fetal variety, which is the type of case to be presented, develops after the third month of intra-uterine life and is due to the lateral halves of the abdominal wall failing

excepting possibly hydrocele of the umbilical cord, which might be confused with a urinary diverticulum.

There is little known regarding the de-



Fig. 1



Fig. 2



Fig. 3



Fig. 4

Fig. 1. Drawing of babe at birth. Cord tied.
 Fig. 2. Drawing of sac opened at time of operation, showing many adhesions.
 Fig. 3. Actual photograph of babe at age of ten days.
 Fig. 4. Photograph of babe at age of three months.

to close completely, so that a portion of the intestines projects into the cord itself, where it lies in a sac, composed of a thin semi-transparent membrane made up largely of amnion and peritoneum, in which are occasionally disseminated masses of Wharton's jelly.

The herniated viscera can easily be seen through this semi-transparent membrane. In small hernias if unnoticed during confinement the bowel may be ligated when the cord is tied off with the result that strangulation, followed usually by death and occasionally by a fecal fistula, will ensue.

If untreated and if this accident is avoided this variety of hernia will nevertheless terminate fatally, for, when the cord separates, the peritoneum will become open and septic peritonitis will probably result or the thin coverings slough and peritonitis supervene.

During early fetal life a considerable portion of the small and large intestine normally lies in the umbilical cord or body stalk occupying the exocoelomic cavity. Under normal conditions the intestines gradually recede into the abdominal cavity and the cavity in the cord is obliterated.

There is small chance of mistaking a congenital omphalocele for any other condition

developmental causes of these hernias. Many theories have been advanced, but none of them has much practical value, although they are of some historic interest. Cruveilhier believed that congenital omphalocele is due to pressure on the abdomen of the fetus as it lies in a faulty position.

Scarpa thought it might be produced by traction exerted on the cord by its winding about the body of the fetus.

Ohlfeld suggested that it might be caused by the constant pulling of the vitelline duct on the intestines in the root of the umbilical cord.

St. Hilaire was of the opinion that accidental bands of the adhesions held the viscera outside the abdomen, thus preventing the opening from closing.

CASE REPORT

The baby's mother, Mrs. McG., was a diuipara who had had a perfectly normal spontaneous delivery two years prior.

Her prenatal care was uneventful. The blood pressure was always around 120 systolic and 70 diastolic. The urinalysis was negative except an occasional trace of lactose. The blood Wassermann was negative.

On March 21, 1929, this baby boy was born spontaneously from a R.O.A. position. This was eighteen days sooner than labor was expected. When examining the baby after delivery a large bulging sac presented itself with the cord which was soft in

consistency and pulsated. The cord was tied several cm. beyond the herniated mass.

An attempt was then made to replace the herniated viscera into the abdominal cavity, but, due partly to the small development of the abdominal wall and due to the many adhesions between the intestines and the peritoneal sac, this attempt proved futile. The sac was then opened and another attempt was made to push the intestines back into the abdominal cavity, but due to the many adhesions and the baby's crying and straining this could not be performed. A general surgeon, Dr. E. V. Johnston, was then called in consultation. The baby was given an ether anesthetic, when about one and one-half hours old. The many adhesions between the intestines and the peritoneum in the omphalocele sac, numbering about twenty in all, were separated.

The opening at the umbilicus was enlarged and the intestines replaced with considerable difficulty because of the small abdominal cavity and the rapidity with which the intestines became distended with gas, while exposed to the air.

All the small intestines, the cecum and appendix, the ascending, transverse and descending colon filled the sac. The liver was not in the sac.

The abdomen was closed in layers with No. 2 plain catgut and we thought the baby was in very poor condition. However, the baby was given saline and heat was applied. It responded quite readily to this treatment and in a few hours seemed much better. For five days the baby was unable to keep water or any kind of fluids in its stomach. It vomited greenish fluid continuously. Eight ounces of normal saline was given under the breast every

morning and 8 ounces of 10 per cent dextrose solution was given under the breast every evening. On the sixth day it was able to retain small quantities of fluids in the stomach. From that time on it rapidly gained the ability of taking milk in small quantities.

The baby appeared to have peritonitis around the third to fourth day, due partly to the infection because the operation was not performed until after the intestines had been exposed to the air for about 1.5 hours and because the abdomen was very tense due to the stretched abdominal wall.

From the fifth to the tenth day the baby developed an intense jaundice possibly due to the excessive amount of dextrose injected.

On the tenth day the baby was photographed and showed quite an extensive skin infection with some sloughing. This sloughing area was treated with 50 per cent alcoholic solution and the skin was drawn together with adhesive, until it was entirely healed, which occurred when the baby was about four weeks old. The baby is still living and well.

CONCLUSION

Congenital omphalocele, if of the fetal type, demands immediate operation, for there is no other way the herniated viscera can be replaced in the abdominal cavity, and if the operation is performed early and under aseptic conditions the results may be surprisingly good.

VINCENT'S ANGINA

A CASE OF LUNG ABSCESS AND INTERLOBAR EMPYEMA FOLLOWING EXTRACTION OF A TOOTH UNDER GAS ANESTHESIA

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We have frequently seen and heard of the damage done to some remote organ or organs following the extraction of a tooth. There are very few cases reported of such accidents due to the organisms of Vincent's angina. No doubt there are more cases of this nature than one is led to believe. Burns¹ in 1926 emphasized the importance of Vincent's infection not only in its obvious relationship as a precursor of pyorrhea, but in its infinite possibilities as a causative agent in other conditions of unknown etiology. He stated that in order to emphasize its importance to the medical and dental profession it should be made reportable.

Thompson² reported a fatal case of brain abscess due to Vincent's angina following extraction of a tooth under procaine hydrochloride. This prompted him as it did us to review the literature, and Vincent's angina was found in connection with one case of acute leukemia, one of pemphigus, hospital gangrene, pelvic peritonitis, industrial wounds, tooth wounds, and two cases of brain abscess.

It is very interesting to note that the case

to be reported presents lesions very similar to those produced by Smith³ in rabbits. He produced fuso-spirochetal disease in the lungs of rabbits with cultures from Vincent's organisms. With certain aerobic and anaerobic cultures he was able to isolate eight organisms in pure culture from the throats of patients with angina. None of these alone produced disease, but a mixture of a pure culture of *Treponema microdentium*, a small fusiform bacillus, a vibrio, and

an anaërobic streptococcus resulted in a typical fuso-spirochetal abscess in the groins of mice and guinea pigs. Pus from these abscesses was inoculated in the trachea of rabbits, which resulted in fuso-spirochetal lesions in the lungs of these animals. The rapidity with which the process developed was remarkable, two rabbits dying of pneumonia within forty-eight hours. One rabbit developed a lung abscess with empyema, and another bronchiectasis.

REPORT OF CASE

J. K., aged thirty-seven, gives an essentially negative past history, and was in excellent health up to the time of his present illness. On February 9, 1932, the right lower second molar tooth was found to be abscessed and was extracted by an exodontist under gas anesthesia. About twelve hours later patient began to suffer with acute pain throughout the entire chest with difficulty in breathing. Temperature was 102 degrees, and the only positive sign found on physical examination was a friction rub in the right lower chest posteriorly. There was also a small dirty ulcer on the edge of the tongue just opposite the space left when the tooth was extracted.

The patient's temperature ranged from 101 degrees to 104 degrees during the following seven days. There was an unproductive cough accompanied by pain, which was now more or less localized in his right chest. He was also very delirious. The physical signs now were some increased dullness in the right chest posteriorly from the fifth intercostal space down. The friction rub was still present, also some coarse râles. There were no signs of consolidation. An X-ray of the chest on February 16 "pointed to pulmonary pathology, incident to an extraction apparently with as yet no indication of breaking down. Subsequent roentgen investigation would be justified to determine the presence or absence of breaking down in the pulmonary tissues."

At this time a sputum examination was negative for tuberculosis, a white blood count was 18,200, polymorphic nuclears 86 per cent, lymphocytes 12 per cent, monocytes 2 per cent. Urinalysis was negative.

On February 22, thirteen days after onset, the patient was taken to the hospital. The roentgenogram of the chest now "reveals a triangular shadow on the right side, on a level with the fifth and sixth intercostal spaces in the axillary line. This triangular shadow has a base of about 10 cm. and the apex is slightly internal to the mid-clavicular line. The edges of this shadow are feathery in appearance. From the roentgenogram the condition has the appearance of an interlobar pleurisy with effusion." A needle puncture was made in the right chest in the sixth intercostal space, in about the posterior axillary line and several cubic centimeters of an intensely foul smelling, dirty greyish pus was removed. A smear of this was taken and was found to be loaded with Vincent's organisms, namely spirilla and fusiform bacilli. Smears were then taken from the ulcer on the tongue and from the cavity left from the recently extracted tooth. These presented the same picture.

On February 24 the patient was taken to the operating room and under local anesthesia the right side of the chest was incised at the sixth interspace and posterior axillary line. Upon opening the pleura about 150 c.c. of a very foul smelling dirty grey pus escaped. A smear of this material also showed Vincent's organisms in abundance.

Postoperative treatment consisted in sodium per-

borate mouth washes; a bi-weekly injection of .6 gms. of neocarsphenamine intravenously; fluids forced by the intravenous, subcutaneous and oral routes; daily irrigation of the chest cavity with Dakin's solution through the drainage tube.

Postoperatively, the patient improved clinically. The ulcer on the tongue gradually disappeared. The delirium also disappeared. Until March 6, his temperature fluctuated between 100 and 103 degrees, and from then on it ranged between 98.6 degrees and 100 degrees. The patient, however, continued to cough, and gradually began to raise more and more sputum which had a very foul odor, and was most abundant in the morning. Repeated sputum examinations showed no tuberculosis, but Vincent's organisms were frequently seen. A blood Wassermann test and blood culture were both negative.

A roentgenogram of the chest on February 26 "revealed a decrease in the density and size of the triangular shadow. There was an accentuation of the markings of the bronchovascular tree."

The patient left the hospital on March 9. He improved rapidly at home. His temperature remained normal most of the time and his appetite improved. He still raised considerable foul smelling sputum, however.

On March 25 another roentgenogram was taken: "the shadow in the right lung field had entirely disappeared. There was an extensive accentuation of the descending branches of the bronchi with infiltration. The picture was that of bronchiectasis." The X-rays were read by Drs. E. R. Witwer and Henry L. Ulbrich.

The patient still raises some foul smelling sputum, and his temperature remains slightly elevated. On April 14 patient's gum in the vicinity of the first lower right molar became swollen and a small greyish white patch was present at the margin. A smear of this again showed Vincent's organisms.

CONCLUSION

1. This report was written chiefly to make dentists and physicians aware of the dangers following the extraction of teeth when Vincent's organisms are present.

2. Cases such as this have been reported in the literature only rarely. No doubt there are more cases of this nature than one is led to believe.

3. Smears of all suspicious gums should be taken before the extraction of a tooth, and if Vincent's organisms are found this condition should be cleared up before any attempt to remove the tooth is made.

4. Our case was one of lung abscess with interlobar empyema due to Vincent's organisms, following the extraction of a tooth under gas anesthesia, with a resulting bronchiectasis. It is interesting to note that this pathology has been produced in rabbits by experimentation.

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INTRAPERITONEAL THERAPY

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The importance of supplying adequate fluids in the treatment of certain surgical and medical conditions has been thoroughly emphasized, especially since the war, and all hospitals are supplied with equipment for this purpose. Equally important is the necessity of sufficient fluid administration in the treatment of acute illnesses in children, although this fact is not fully appreciated by many general practitioners who do pediatric work.

The need of large amounts of fluids in children is due largely to their hydro- and thermolability, and to the fact that the infant body is made up of a much larger percentage of water than is the adult body. In acute illnesses, much water is rapidly lost due to sweating and loss through the lungs, and a loss of weight amounting to a pound or more a day is commonly noted due to this cause. The vicious cycle of fever and dehydration may of itself become fatal if not broken.

The difficulties of administering fluids to infants and children during illness are very real. The coma of diabetes, refusal to take food or fluids, and vomiting, often hamper oral administration and make some other route absolutely imperative. Proctoclysis is impracticable, since fluids are usually not retained unless given very slowly, and children will not tolerate a tube over long periods of time. Hypodermoclysis is painful and allows but small amounts to be given. Intravenous injections are practically impossible except by exposure of the vein, which limits strictly the number of times the procedure may be repeated.

Since the introduction of the intraperitoneal method by Blackfan and Maxcy, this important problem has been largely solved. Much larger quantities may be given by this method than by any other, and clinical observation indicates that the fluids are rather rapidly absorbed. The circulation is not taxed, even when large amounts are injected, and yet the time of administration is only a few minutes. Probably the greatest advantage is that the procedure may be repeated indefinitely without harm to the patient, and the only pain associated with it is the introduction of the needle. It is possible to administer the entire calculated fluid requirement of the child by two or three injections

daily, and when it is desired to give the gastro-intestinal tract a complete rest for one or two days, the method is invaluable.

The technic is very simple, and can easily be carried out in the home, where the majority of children are cared for. The usual gravity method intravenous set may be used, or, as has been found very satisfactory at Memorial Hospital, a set consisting of a 50 c.c. syringe, six inch rubber tubing, a 19- or 20-gauge needle, and a 200 c.c. glass. The set is sterilized and wrapped so that it may be carried anywhere. After scrubbing the hands thoroughly, the set is assembled and the skin sterilized. The needle is inserted by a quick thrust through the rectus muscle on either side of the umbilicus, and the fluid injected as rapidly as the needle will carry it. Some clinics prefer the midline, either above or below the umbilicus, but there is less possibility of leakage if one goes through muscle.

From 10 to 15 c.c. of fluid per pound of body weight may safely be given at one time, but one should watch the respiration carefully, and if signs of interference appear, the injection should be stopped at once. Physiologic saline solution, or Ringer's solution, may be given, but there is evidence that the excess of chloride in these may at times aggravate an existing acidosis. Hartmann has advocated a so-called combined solution which may be given in either acidosis or alkalosis, and which has been found to be serviceable. Five per cent glucose solution in either saline or distilled water may be used in diabetic coma, or as a food when oral ingestion is limited. Whole blood may be given when indicated, and repeated as often as required. One of our cases had eight transfusions, in none of which did a reaction occur. In addition,

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one may administer sera, vaccines, arsenicals, or, in fact, any medication that may be given intravenously.

Any inflammatory condition within the abdomen is, of course, a contraindication, as is any condition producing peritoneal adhesions. Saline or Ringer's solution may be given in the presence of enteritis, although glucose often aggravates the condition. In the presence of extreme distension, the procedure should be used with caution. Puncture of the gut or bladder, while a remote possibility, has never occurred in the experience of those who have used the method widely. Syncope from pressure on the diaphragm need not result if one watches the patient carefully, and does not exceed the limits mentioned above. Reactions, consisting of distension and slight rise

in temperaure, may occur if care is not used in the preparation of the materials to be injected, although at times, as in intravenous work, collapse occurs, and, in rare instances, death. Reactions are certainly fewer, however, than in intravenous injections, and, when they do occur, are much slighter.

Grulee puts his finger on the sore spot when he points out that the greatest barrier for the average practitioner to overcome in using the method is a psychical one, since early surgical training leads him to fear the peritoneal cavity. He is inclined to be startled by the use suggested above, and to shrink from using it, even when proof of its efficacy and relative harmlessness is available. However, in my opinion, nothing of greater practicability in the care of sick children has been developed during the past decade.

BILATERAL OPTIC NEURITIS AND ELECTRIC RETINITIS

REPORT OF TWO CASES

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The first case is of a young, recently married woman of twenty-five. She complained of blurred vision, occipital headaches of eight weeks' duration, which showed no periodicity; tinnitus in the right ear, transient periods of pronounced deafness and malaise. Previous to her arrival at the office her family physician called and informed me that she had been advised to have her ethmoids exenterated and her tonsils removed. My examination showed no evidence of paranasal sinus involvement, although she maintained stoutly that she had sinus trouble and had recently obtained large amounts of purulent material from her nose.

The tonsils were small, pale and to all appearances harmless.

She had a well advanced bilateral optic neuritis with papilledema.

Desiring to check my X-ray findings, which were negative, I referred her to a roentgenologist with a request for an examination of the paranasal sinuses and cranium and received the following report:

"The paranasal sinuses were examined stereoscopically in the postero-anterior position. The sinuses are moderately developed. The frontal sinuses are pneumatic. There is no definite involvement of either group of ethmoid cells in a disease process. There is a slight clouding of the inferior portion of the left maxillary sinus, although both maxillary sinuses are pneumatic. There is some evidence of intranasal disease, although the bony nasal septum is fairly straight.

"The skull and sinuses were shown in the left lateral plane. We note the presence of an unerupted third molar which, however, has normal position. The sella is not enlarged nor eroded. There are no increased intracranial pressure changes.

"The skull was also examined stereoscopically in the right lateral position. These films demonstrate no erosion or thickening of either table of the skull. There is no disturbance in the vessel markings and no evidence of increased intracranial pressure or tumor shadow."

A negative blood Wassermann had been obtained about a week before I saw her, but a spinal fluid

taken the day after her visit to the office was reported as XX.

Specific treatment was started immediately by the family physician and was followed by rapid improvement.

The second case is that of a robust man, of thirty-seven, who complained of dimness of vision and floating objects in the right eye. These symptoms appeared a few hours following his observation of an electric welding operation. He was not perturbed, because he had had a similar experience, two years before, accompanied by a more pronounced visual defect, followed by complete recovery.

His vision was O.D. .5 O.S. .8.

The fundus details of the right eye were obscured by a very cloudy vitreous. The left retina was somewhat reddened in the macular region, but no floating opacities were visible. Potassium iodide was prescribed and eight days later the vision in the right eye was normal, when one of the few floating opacities that remained were not in the line of direct vision. Normal vision returned in the left eye on the 18th day.

Except for a few small opacities in the right vitreous the eyes remained normal for 14 weeks, when, following another "flash," the vision of the right eye was reduced to .7 and the vitreous was again quite cloudy. Vision in the left was 1.

Ten days after this latest "flash" the vision of the right eye dropped to counting fingers at 7 feet and the patient complained of a striated, amber colored clouding of the inner two-thirds of the visual field of the right eye.

The ophthalmoscope revealed a haziness of the temporal side of the retina, most pronounced in the region of the macula, which was encircled by a faint white ring. No floating opacities were visible.

A thorough examination by his very competent family physician revealed no possible etiological or contributing factor except a small amount of detritus in the slightly reddened tonsils.

These were removed but no ocular change was anticipated nor obtained.

GALL-BLADDER DISEASE AND DIABETES

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It is a well known fact that there is a constant relationship between diseases of the biliary tract and pancreas and we propose to advance the hypothesis that these are frequently forerunners of, or are associated with, diabetes mellitus. To the old dictum of "Fair, fat and forty, gall stones or gall bladder disease," we propose the additional phrase "potential diabetic." Joslin states that in a series of 1,000 cases of diabetes over 30 years of age, 83 per cent were overweight. He also states that heredity undoubtedly plays an important rôle in transmitting some of the etiological factors, namely, disturbed endocrine function, habits, diet and environment. Both biliary tract disease and diabetes are more common in the female, over forty years of age. As Jewish women tend to lead a more sedentary life and formerly did not pay much attention to calories, they frequently developed one or both conditions. Both diseases are rare in the negro. Pregnancy predisposes to biliary tract disease and indirectly to diabetes. Mann has shown that gall bladder stasis and delayed function do occur during pregnancy. In pregnancy there are frequent metabolic disturbances and altered glandular functions and occasionally these patients develop transitory lactosuria or glycosuria. Repeated pregnancies increase these changes and later the patient may develop diabetes mellitus. Let us quote briefly an example.

Mrs. L., aged twenty-four, overweight, had a definite gall bladder colic when on her honeymoon, lactosuria while nursing her first child, transitory glycosuria with second child, and three or four years later diabetes mellitus. She developed an acute otitis media, mastoiditis, mastoidectomy; severe diabetes followed. She recovered on insulin therapy and careful dietary management and went along fairly well until she became pregnant again. She would not adhere to her diet or take insulin or be checked up. In her eighth month she entered the hospital in a serious condition with diabetic coma, acidosis, etc., and ten days later was delivered of a dead fetus. She is making a fairly good recovery now.

We report this case in detail to show how biliary tract diabetes mellitus gradually developed. In our opinion if she had been subjected to early gall bladder surgery with drainage of the gall bladder or duct, she might have been spared these very serious illnesses. This assumption is based on the clinical results we have seen in many early gall bladder cases and also in some of the more severe diabetics which we herewith present. Our records show that in patients presenting themselves for examination, where we detected hyperglycemia and diagnosed diabetes mellitus, 50 per cent of them gave definite clinical history of biliary tract disease, varying from mild distress to gall stone colic. Many had several attacks.

In this series the oral Graham test was made on eight of these patients and it was positive in seven. The only patient with a negative Graham vomited the dye and the test has not been repeated. In other words 87 per cent gave positive X-ray evidence of biliary tract disease. We have had blood sugar estimations made on most of our gall-bladder cases and have found them to be generally higher than the normal average. Inasmuch as these findings are so constant, we recommend that every patient (over

Name	Age	Sex	Gall Stone Colic	Gall Bladder Distress	Preg-nancies	Sugar in Urine	Diabetes Diag-nosed	Blood Sugar	Graham Test	Operation	Post-operative Course	Post-operative Result	Remarks
1. W. L. L.	46	F	3 yrs.	5 yrs.	4	2 yrs.	1929		Pos.	Not yet			Med. tr. op. soon
2. W. H.	34	M	No	3 yrs.	No	2 yrs.	1930	.235	Pos.	Not yet			Med. tr. op. soon
3. F. G.	40	F	No	1 yr.	1	1 yr.	1930	.33	Pos.	Not yet			Med. tr. op. soon
4. C. S.	29	F	No	6 yrs.	0	1½ yrs.	1930		Stones Neg.	Not yet			Med. tr. op. soon
5. C. S. H.	31	F	No	2 mos.	3	2 yrs.	1929		Pos.				
6. I. S.	45	F	9 yrs.	10 yrs.		1 yr.	1931	.235	Pos.	Ectomy (stones)	Smooth	Still has 1 pls. sug.	Med. Man.
7. R. S.	58	F	5 yrs.	19 yrs.	4	2 yrs. & Acetone	1929	.260	Pos.	Ectomy-stones (dochoostomy)	Stormy	Excellent, no sugar	Entered hospital in coma
8. D. F.	65	F	2 mos.	4 yrs.	18	5 yrs.	1926	.180	Pos.	Ostomy (stones)	Smooth	Excellent, no sugar	
9. H. T.	56	F	5 yrs.	4 yrs.	12	4 yrs. & Acetone	1927	.20	No	Resect. G. B. st. (dochoostomy)	Stormy	Very good	Entered hospital in coma
10. L. M.	55	F	6 mos.	1 yr.	0	1 yr.	1930	.220	No	Ectomy Ostomy-stones	Smooth	Very good	
11. J. O.	27	F	1 yr.	1 yr.	2	1 yr.	1931	.159	No	Ectomy-stones	Smooth	Very good	
12. J. Z.	40	F	3 yrs.	5 yrs.	2	1 yr. & Acetone	1931	.117	No	Ectomy-stones Dochoostomy	Smooth	Very good	Hypertension for 5 years
13. C. M.	70	F	10 yrs.	12 yrs.	1	3 yrs.	1928	.111	No	Ectomy-stones	Stormy	Very good	
14. G. L.	76	F	14 yrs.	17 yrs.	14	½ yr.	1931	.154	No	Ectomy Ostomy-stones	Critically ill	Died	Hepatitis-Mycocarditis

14 cases—7 positive Grahams—5 acute cases sent directly to hospital. 1 negative Graham.

14 cases—all showed sugar in urine—9 hyperglycemia—2 normal—2 not made.

12 cases complete recovery.

8 cases complete recovery—1 case (14) died—5 cases not heard from.

1 case still has diabetes—(6) ectomy without dochoostomy.

1 case died.

forty) who has glycosuria (excepting cases of renal glycosuria) or hyperglycemia, after proper diet, with or without insulin, should have a very careful investigation of the biliary tract, Graham test, liver function tests, etc. Lyon's method of medical drainage of the gall bladder may be used as a diagnostic or therapeutic aid. Repeated examinations may be necessary.

Surgeons who operate upon the gall bladder usually find: (1) Evidences of gross scarring of liver near the gall bladder fossa. Some thickening or lobulations and occasionally changes in color and consistency of liver; (2) Inflammation of the lymphatics along the ducts, adhesions; (3) Varying degrees of induration or edema of gastro-hepatic omentum and pancreas; (4) Varying degrees of inflammation of walls of gall bladder and ducts; (5) Mild catarrhal to acute hemorrhagic pancreatitis. We should (when possible) remove sections of the liver and gall bladder for pathological examination.

We have had many cases of empyema of the gall bladder and acute exacerbations of chronic cholecystitis and pancreatitis enter the hospital with marked glycosuria, high blood sugar and even some with diabetic coma. After careful medical management and preparation these patients were operated upon, and either a cholecystostomy or a cholecystectomy with drainage of cystic or common duct performed. We have been more than pleased with the results obtained, and so are the patients. Several of them have made excellent complete recoveries and are now sugar-free without insulin on ordinary diets.

Whipple reports that in many similar cases carefully watched at the Presbyterian Hospital removal of the infected gall bladder or the drainage of the infected common duct has resulted in permanent recovery from the symptoms referable to the diseased pancreas.

Many patients have biliary tract disease without either classical or even indefinite symptoms referable to these organs. In fact in the routine careful examination of the gall bladder and liver as a part of every abdominal operation one is surprised at the number of so-called "silent" calculus gall bladders.

If we have a patient with glycosuria with or without hyperglycemia and the clinical

history or the laboratory data show evidence of biliary tract disease, and the patient does not readily respond to medical management, we believe that surgical treatment should be instituted before more serious complications ensue.

Pathologists for many years have pointed out to us the marked increase in the connective tissue of the pancreas in diabetes mellitus; it is usually of the interacinar or intralobular type according to Opie. This increase in connective tissue may be caused by an arteriosclerotic or endarteritic condition of the vessels, by a syphilitic process or by blocking of the ducts. Often it is the result of long standing and persistent infection of the pancreas which communicates freely with the biliary tract, duodenum and transverse colon.

The pathologist finds frequently, in fatal cases of diabetes, marked changes of the liver, biliary cirrhosis, hepatitis, fatty degeneration and bile colored pigmentation of the cells; similar changes are found in the pancreas and liver in long standing biliary tract disease. Osler described some of these changes many years ago.

We have attempted to illustrate how biliary tract disease and diabetes mellitus occur in the same type of individual over forty years of age, that the onset of biliary tract disease may precede diabetes, that the infection of the biliary tract may cause chronic pancreatitis and thereby predispose the patient to diabetes, that similar pathological changes may be found in the liver at autopsy. We have shown that, in a few cases where both diseases were present, proper gall-bladder surgery has resulted in permanent cure of both diseases.

We suggest that in all cases of diabetes (over forty years of age), excepting those in coma, the biliary tract should be carefully studied. This should include a careful history, liver function tests, Graham test, blood sugar estimations. If these tests show impaired function, persistent hyperglycemia and glycosuria after careful medical regime, we believe these patients should have combined surgical and medical treatment.

We believe that a great deal of morbidity would be saved if all patients of both types were subjected to these careful examinations.

MICHIGAN'S DEPARTMENT OF HEALTH

C. C. SLEMONS, Dr.P.H., M.D.,

Health Commissioner

LANSING, MICHIGAN

VACATION TYPHOID

The season for vacation typhoid is now on. The incidence of this disease in Michigan since the first of January has been somewhat higher than for the two or three years previous. Several local outbreaks have accounted for this increase.

Whenever we have the combination of typhoid carriers or cases plus lack of sanitary measures it is inevitable that typhoid cases will result. Such circumstances are bound to occur wherever we have a number of people congregating at resorts and other places where there is a lack of properly controlled water supplies, sewage disposal, and handling of milk and other foods.

More than the usual number of cases of typhoid have recently been traced to carriers. It is generally conceded that most of our typhoid fever which now occurs is the result of spread of infection from carriers.

City dwellers are apt to think that they get typhoid fever by visiting rural places during vacation. Although this is quite true, it is also true that the typhoid carrier who is relatively harmless while living in the city, becomes a grave menace while living at a summer resort. In other words the typhoid carrier is apt to take typhoid to and spread it among his fellow vacationists as well as among the rural inhabitants with whom he comes in contact.

In order to be safe the vacationist should be warned to be immunized, to guard himself against polluted water, to use only pasteurized milk, and if impossible to secure pasteurized milk to boil his milk, and to guard against flies.

In addition to this he should be advised to be ever on the alert against eating food that may be handled by a typhoid carrier. His best friend and most intimate associate may be that carrier.

C. D. B.

RESORT INSPECTION

The annual inspection of summer resorts was started by the Bureau of Engineering on July 5, with the state districted and an

inspector assigned to each district. Following the plan initiated last year, representatives from the Michigan Department of Health are to carry on the general inspection and dairy inspectors from the Department of Agriculture are to handle all milk inspections.

Resorts are checked on water supply, milk supply, disposal of sewage, garbage and fish offal, camp site, food handling and bathing. According to the showing made in the various items, the resorts will be rated on a graded scale, those receiving percentages between 90 and 100 being rated as "A," between 80 and 90 as "B," between 70 and 80 as "C," and 70 or below as "D" or unsatisfactory. In 1931, of the 1,791 resorts visited, 18.6 per cent rated "A," 30.1 per cent "B," 20.4 per cent "C," and 19.4 per cent "D."

This year the four district health departments sponsored by the Children's Fund, the Newaygo Health Unit, and the Barry, Kent and Allegan County Health Departments are making the inspections of resorts in their territory. Their representatives are deputized by the Department of Agriculture to inspect milk supplies.

HIGHWAY WATER SUPPLY INSPECTION

The roadside water supply survey for the protection of highway travelers was begun in June. Four representatives of the Bureau of Engineering were assigned to collecting samples, inspecting sources, and posting the yellow metal approval signs on the safe supplies. As usual, the state trunk lines are to be covered.

During the seven years in which summer work in highway water supply supervision has been carried on, the percentage of safe sources has increased from 63.7 in 1925 to 81.6 in 1931.

A LABORATORY STUDY

As a part of the program for the checking of laboratories making diagnoses of communicable disease in Michigan, a study of the reliability of serum diagnosis of syphilis has been conducted by the bureau

of laboratories of the Michigan Department of Health.

There are fifty laboratories in the state making serological tests for syphilis and to each of these laboratories five serums were sent. These serums were obtained from five individuals, about 250 c.c. of blood being taken from each one. Four of these five were known syphilitics under treatment. The other was supposedly not infected. The blood serum was passed through Seitz filters and handled aseptically to avoid contamination and its consequent effect on serums which had to be held for some time before the tests were made. This handling apparently did not affect the tests for they were run repeatedly in the state laboratory with a number of different methods. Even after standing for more than three weeks there was little change in the results.

Five specimens were sent to each of fifty laboratories and reports were received from 47 laboratories. Three laboratories failed to report, one of which did not receive the serum. Three laboratories failed to receive serum but second sets were sent to two of these.

The reports for the most part were closely correlated and indicate a reasonable degree of accuracy in the majority of laboratories. No analysis of the results has been attempted as yet. It is interesting to note that 44 laboratories reported the Kahn test, 12 the Kolmer, 3 the Kline and 10 some other complement fixation test. A more detailed analysis is impossible at the present time. Many laboratories are using two or more tests but the form of report used did not request information as to which test was given preference.

CHILD HYGIENE

A year's prenatal nursing program carried on under the supervision of local doctors has just been completed in Berrien County by Martha Giltner, R.N. During the year Miss Giltner has had 520 prospective mothers under her supervision and has made 856 prenatal calls, 524 postnatal calls, and 98 calls on infants. A prenatal nursing program in Allegan County will be started by Miss Giltner about July 15.

A program for prospective mothers and mothers of infants and young children has been carried on for the past year in Eaton County by Caroline Hollenbeck, R.N. One hundred and thirty-seven prospective

mothers were under her supervision during the year, during which time she made 2,352 home calls. Miss Hollenbeck has now begun a Breast Feeding Campaign in Ionia County.

Breast Feeding Campaigns are being conducted in Leelanau, Montcalm, Tuscola, Ontonagon and Ionia Counties. Nurses carrying on the work also deliver certificates of registration of birth to parents of children born in the counties listed.

Women's classes in infant and child care are now being conducted in Mason, Marquette and Delta Counties, and special nutrition talks are being given by Helen Linn, R.N., in Marquette County.

AN ITALIAN VISITOR

Doctor Oscar Palesa of Rome, Italy, has been a guest of the Michigan Department of Health since June 4. Doctor Palesa has just completed a course in Public Health Administration at the Johns Hopkins School of Hygiene, prior to which he was Director of the National Institute for the Protection of Infancy and Maternity in Rome, Italy. He is at present visiting staff members of the Bureau of Child Hygiene and Public Health Nursing in Berrien, Leelanau, Montcalm and Mason Counties, where special types of maternal and infant welfare programs are being conducted. He will also visit Wexford, Genesee, Midland, Saginaw and Barry County Health Units and the Detroit Department of Health before leaving the state.

STAPHYLOCOCCUS FOOD POISONING

Edwin O. Jordan, Chicago, has noted that the staphylococcus type of food poisoning differs in several respects from the more familiar type, due to members of the Salmonella or parathyroid group. There is a distinct difference in the incubation period. Staphylococcus food poisoning usually develops within a few hours after the toxic substance is swallowed. In the outbreaks thus far traced to this source, nearly all the persons affected have manifested symptoms within four hours, although rarely symptoms have appeared later. Human volunteers, of whom the author now has a record of approximately 100, almost invariably show the first objective symptoms in from two to four hours after swallowing toxic staphylococcus filtrates. Vomiting appears with considerable regularity about three hours after the feeding. No deaths have yet been observed from food poisoning of the staphylococcus type. In the four outbreaks definitely traced, twenty persons are known to have been acutely ill, without any fatalities. The same is true of the instances reported by Barber and by Ramsey and Tracy, living staphylococci as well as their products being swallowed in these cases. In four additional out-

breaks summarized in which there is strong evidence that staphylococci were the inciting agents, 206 persons were affected, without a death. Approximately 100 human volunteers who have become ill after swallowing sterile toxic filtrates have all recovered completely. The symptoms are, however, in some cases alarmingly violent and accompanied by great prostration. The author does not believe that it can yet be said that this form of food poisoning is without danger to life.—*Journal A. M. A.*

TREATMENT OF OBESITY WITH LOW CALORIC DIETS

Frank A. Evans and J. M. Strang, Pittsburgh, used low caloric diets in the routine treatment of 187 obese patients. These 187 patients lost 5,659 pounds, an average of 30 pounds (13.6 Kg.). The average duration of the dieting period was 8.7 weeks. The average weekly weight loss was 3.5 pounds. Practically all patients lost weight more rapidly during the first four weeks than later. The 133 patients for whom weight changes are available for this period lost an average of 16 pounds in this first month. Since the rate of weight loss is fundamentally determined by the difference between the intake and the output of energy, the course in any given case was influenced primarily by the fluctuations in energy output. The tendency for the basal metabolism to reduce to normal levels after from two to three months was an important factor in the relative slowing of the rate of progress after prolonged dieting. On the basis of their observations the authors conclude that the excess weight of the obese is inactive storage tissue. The level of oxygen exchange in the obese is high when related to the ideal weight, which is a measure of the actively functioning body tissue. Diets containing 1 Gm. of protein and 0.6 Gm. of carbohydrate per kilogram of ideal weight and no fat, other than that inseparable from the protein ration, afford menus of from 400 to 600 calories on which these patients lose weight rapidly. The patients are not hungry. They report an increased feeling of well being and resistance to fatigue. Headaches, minor disorders and frequently dysmenorrhea are relieved early in the period of dieting. The satisfactory clinical results are obtained because only the inactive excess fatty tissue is being removed. The vital tissues are not wasted as in starvation, as shown by careful studies of oxygen, nitrogen and creatinine metabolism. Because of physiologic strain which obesity throws on the organism, one evidence of which is the high level of basal metabolism, thyroid extract and other agents which increase the total energy output are contraindicated. A few patients, perhaps not over 2 per cent, do not lose weight with practical rapidity by diet alone. These patients cannot be differentiated from the others by history or physical examination. They may be recognized with assurance by careful observations of the rate of weight loss and of the basal metabolism during a period of dieting. In these patients, carefully regulated doses of thyroid are beneficial in conjunction with dietary treatment.—*Journal A. M. A.*

DIAGNOSTIC INACCURACY IN TUBERCULOSIS OF BONE, JOINT AND BURSA

Joseph E. Milgram, Iowa City, reviews the clinical impressions that he obtained in the study of 142 cases of tuberculosis of bone, joint and bursa which were verified in the pathologic laboratory. Although the classic picture emphasizes particularly the insidious onset of joint tuberculosis, in 29.5 per cent of the cases the onset was sudden. As to the relation of trauma, nothing definite could be adjudged

save that the appearance of symptoms after an unusually severe injury followed often by prolonged incapacity for labor was a frequent observation. Thirty-nine, or 26.7 per cent, of the entire group stated that the pain was severe at the onset, whereas 103, or 73.2 per cent, presented the classic picture of mild to absent pain. The insistence on mild pain in "closed tuberculosis" is not justified in this material. The variability of signs was marked, and statistical analysis of factors such as the degree of muscle spasm, muscle atrophy and functional limitation was not found possible. The anatomic location often modified signs considerably. So, diaphyseal lesions exhibited considerable local tenderness. Thus, synovial lesions confined to distant recesses of the knee joint presented minimal signs, whereas articular destruction was characterized by obvious limitations of function on examination. The rapidity of appearance and the extent of abscess formation, for example, depended not only on fascial plane relationships but also on the personal equation of the patient and on the organism, a quantity not susceptible of mathematical expression. The monarticular or local character of surgical tuberculosis appears to be overstressed in the classic description. In this series of proved cases thirty-five, or 32.7 per cent, presented two or more lesions. In several cases this was responsible for a diagnosis of chronic infectious arthritis, corrected only after biopsy. Roentgen examination, while usually helpful, was often the reverse. In fifty-three cases, such examination was of no aid or was misleading. The appearance of free bodies in the knee, or local bone formation in uncomplicated tuberculosis of the spine, for example, resulted erroneously in the diagnosis in the one case of osteochondritis dissecans, in the other case of hypertrophic arthritis. The value of a negative tuberculin test in excluding tuberculosis in a moderately ill subject appeared to be amply confirmed in the series. However, the necessity of not accepting a report of a single dose of tuberculin as a negative report was apparent. Of all the simple diagnostic aids, a carefully controlled and repeated intradermal tuberculin test, if negative, is of greatest value in excluding tuberculosis. Experienced pathologists frankly admit their frequent inability to recognize tuberculous tissue grossly, particularly in the early cases that are being submitted to operation in these years. Unless the typical tubercle or caseating focus is visible, the tissue is grossly indistinguishable from that in a half dozen other chronic inflammatory conditions. A frozen section helps as a rule. In the author's series, it had not been utilized in many cases. But even with microscopic section, errors may frequently be made. In twelve cases of this series, section of a tissue removed for biopsy failed to reveal the nature of the lesion. "Chronic inflammation" alone could be diagnosed. Inoculation of guinea-pigs, however, demonstrated the organism in each of these twelve cases. Microscopic study alone is not reliable. The isolation of the organism is the only conclusive evidence.—*Journal A. M. A.*

DIABETIC LIPEMIA RETINALIS

Lillian A. Chase, Regina, Sask., describes the thirty-seventh case of diabetic lipemia retinalis. The condition cleared up in seven days on insulin. Thirty-seven analyses of the blood for total lipids, total fatty acids and cholesterol were made. The blood lipids became normal in thirty-six days; the total lipids and total fatty acids dropped rapidly; the cholesterol dropped slowly and showed fewer daily fluctuations. The patient is now, one year later, 52 pounds (23.6 Kg.) heavier than on admission, and is sugar-free on 20 units of insulin daily.—*Journal A. M. A.*

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AUGUST, 1932

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon

EDITORIAL

MEDICAL ETHICS vs. BUSINESS ETHICS

A nationally known surgeon is reported to have advised the adoption by medicine of the methods and practice of big business, among them advertising and practising by groups. This advice has prompted Dr. Manwaring, who has contributed to this Journal a series of articles on medical economics under the general heading Can We Afford

State Medicine, to pay his respects to big business in the final paper of the series which appeared in the July number. Much has been written and spoken by the laity, mostly in a disparaging tone, on the subject of medical ethics. We do not hope to improve editorially on Dr. Manwaring's final paper, but the subject of medical ethics and business ethics is perennial in its importance and freshness. Had business in its widest sense adopted a code of ethics analogous to the time honored rules of conduct of the medical profession which have come down to us from the time of Hippocrates, we might be in a vastly different social condition today. Medical ethics has presented difficulties to the average layman while it has been his protection.

We are led to propound the question as to what is the object of all human activity? The object of law is the securing of justice and justice in the last analysis is for the good of mankind. The object of art is the spiritual uplift of mankind. But what is the object of business? The success of a business man according to ordinary standards depends upon the amount of wealth he has accumulated. He is deemed successful if he sells a large quantity of goods. No questions are asked as to whether the goods have any social value or not. They may consist of patent medicines or of commodities which have a detrimental effect on the consumer. Trade seems to be an end in itself and advertising may be pushed to the point where it stimulates needs in order to increase sales, so that even legitimate products may accumulate out of all proportion to human needs.

Dr. Manwaring has shown up the major sins of big business. No need of repeating them. We feel, however, that there are exceptions and that business institutions exist whose primary object is to serve mankind and where dividends are made secondary to service. Many publishers, for example, serve the spiritual needs of the people in the production of books and magazines of quality often at a very low margin of profit. The more nearly business approximates the spirit of the ethics of medicine the more unselfish and humane is the service rendered. Probably a little application of the ethical principles of medicine to business and politics will assist in the process of recovery from the deplorable mess in which the world finds itself today.

A NEW WAY OF SLENDERING

The Province of Quebec has imposed a tax on all meals costing \$1.00 or over, devoting the money collected to the various hospitals of the Province. Result: a reported falling off in income of \$100,000. To make up or to avoid a deficit the government has decided to impose the tax on all meals costing thirty-five cents or more.

WAYNE COUNTY MEDICAL SOCIETY

In our editorial comment on county society affairs the editor has tried to avoid undue attention to the Wayne County Medical Society, of which he has been a member for nearly a quarter of a century. However, in a sense, conditions affecting the members of the Wayne County Medical Society are of more than local importance. Wayne County, containing within its boundaries the metropolis of the state, is subject to problems arising out of the depression in a more aggravated form than any other part of the state. So that we are forced to an intensive study of them.

Two years ago the Wayne County Medical Society elected a president, Dr. J. M. Robb, who is now president-elect of the Michigan State Medical Society. At the same time, instead of a vice-president a president-elect was chosen, namely, Dr. H. W. Plaggemeyer. The innovation has justified the wisdom of the members. Dr. Plaggemeyer, during Dr. Robb's term of office, was conscientious and persistent in the matter of acquainting himself with the duties involved and he now retires from the presidency with the kind appreciation of the society for his wholehearted services. Both he and his predecessor, Dr. Robb, have held office during the most trying times in the history of the medical society. If either has had other than the wholehearted gratitude of the society we have never heard it. Dr. Plaggemeyer and Dr. Robb will serve the society for several years to come in the capacity of trustees. Dr. Robb brings his experience this year to the presidency of the Michigan State Medical Society.

Dr. H. Wellington Yates after a year of intimate contact with the affairs of the Wayne County Medical Society as president-elect took office as president on July 1.

Dr. Yates has been a member ever since his graduation. He possesses a pleasing personality and his long experience first as general practitioner and later gynecologist and obstetrician well qualifies him for the new office.

Dr. A. W. Blain now holds the office of president-elect. He has an experience and contact as member of the organization extending over a score of years. His position as member of the welfare commission for the past few years peculiarly fits him for the office of president when he will assume it a year hence. Dr. Blain as an administrator of the welfare commission has always been on the side of economy even when sometimes thwarted by influences over which he had no control. He has furthermore endeavored to conserve the interests of the medical profession when the charity of the medical profession was being much abused.

FEARS

Perhaps the most universal phenomenon attendant upon the world-wide depression is the increase of fear which is never wholly absent from human beings. The primal urges of man—yes of all animals—are self-preservation and the propagation of the species. Fear is a protective instinct. In primitive life it was manifest in the mental alertness necessary to protect the individual from wild animals and from the capricious forces of nature. Intelligent human beings are ever seeking security for themselves and for their dependents, hence the constant compelling force that disposes us to lay up for the proverbial rainy day. The past three years have seen this security badly jeopardized for everyone and in many instances swept away entirely, leaving the individual stranded at a time when it is impossible to regain a foothold in the race of life.

The desire for security has disposed men to stress and perhaps to overemphasize the importance of material things as if complete satisfaction could ever be through material objects. Carlyle once said if all the confectioners and upholsterers of Europe were to try to make one boy happy, they would not succeed above an hour or so, for the school boy has a soul as well as a body.

In times like these, men fear to lose what they have acquired. Their suspicion is directed towards other men. Bertrand Rus-

sell, who has uttered many thought-provoking sentences, once said:

"At the present time the fiercest and most dangerous animal with which human beings have to contend is man and the dangers arising from purely physical causes have been very rapidly reduced. In the present day, therefore, fear finds little scope except in relation to other human beings, and fear itself is one of the main reasons why human beings are formidable to each other. It is a recognized maxim that the best defense is attack; consequently people are continually attacking each other because they are expecting to be attacked. Our instinctive emotions are those that we have inherited from a much more dangerous world, and contain, therefore, a larger proportion of fear than they should; thus fear, since it finds little outlet elsewhere, directs itself against the social environment, producing distrust and hate, envy, malice, and all uncharitableness."

The study of human motives is therefore of paramount importance at the present time, even though nothing very definite may be the outcome. A noted English philosopher of the last century, F. H. Bradley, once said: "On all questions, if you push me far enough, at present I end in doubts and perplexities." This sentiment seems to characterize pretty well the blind alleys in which we find ourselves in our endeavor to think our way out of our economic and other difficulties.

THE HORNS OF A DILEMMA

There is a strong movement on foot in Detroit to limit the city budget to \$61,000,000, decreasing the amount a million each year for the next five years. The council claim it cannot be done, that to attempt it will lead to chaos. On the other hand, to go on as in the past years will lead to confiscation of thousands of homes on which the owners are unable to pay taxes. Choose your horn.

HIGHER EDUCATION

The subjects of theses for the degree of Doctor of Philosophy at the June graduation ceremonies of our universities are at least interesting even though unintelligible to the rank and file of *genus homo*. Here are a few: Time Control in Speaking; On the Application of Divided Differences to

Approximation; The Motivation of Exits in Greek and Latin Comedy; The Utilization of Xylose by the White Rat; A Spectrographic Study of RT Aurigæ; The Cyclic Changes in the Ovary of the Prairie-Dog, *Cynomys leucurus* Merriam.

OVERPRODUCTION

"Overproduction! overproduction; runs it not so? Ye miscellaneous, ignoble manufacturing individuals, ye have produced too much! We accuse you of making above two hundred thousand shirts for the bare backs of mankind. Your trousers too, which you have made, of fustian, of janne and woollen cloth, are they not manifold? Of hats for the human head, of shoes for the human foot, of stools to sit on, spoons to eat with. You produce gold watches, jewelry, silver forks, chiffoniers, stuffed sofas. You have produced, produced;—he that seeks your indictment, let him look around. Millions of shirts and empty pairs of breeches hang there in judgment against you. We accuse you of overproducing shirts, breeches, hats, shoes and commodities in frightful abundance. And now there is a glut and your operators cannot be fed."

From the tone of this paragraph it might have been written today. The problem of overproduction resolves itself into one of distribution—placing accumulated goods and merchandise into the hands of the consumer. The paragraph quoted was written about one hundred years ago by Thomas Carlyle, fulminating against the manufacturing and commercial interests of Britain, whom he blamed for an unemployment situation analogous to that which prevails at the present time.

A BIT OF MEDICAL HISTORY

SALERNO

An attempt has been made to trace the current of Greek learning from its source from the fifth century B. C. through the post-Hippocratic sects, the Alexandrian medicine in Rome, Galen, the post-Galenic writers or the Byzantine school to the Nestorians from whom the Arabians caught inspiration and enriched the Greek tradition by making translations anew from the original manuscripts. Through the Arabians, Greek learning was passed on to the Mediterranean countries of Europe, namely, to Spain, Southern France and Italy. However, during the millennium since the death of Galen little or nothing was added. When we come to seek a reason the answer is largely the domination of scholasticism on medieval thought.

Let us digress for the moment to see what scholasticism means. "The intellectual

sterility of the middle ages," according to Hudson,* "was largely due to ecclesiastical authority and the divorce of man from nature, in consequence of which the mind was forced both to work within the narrow limits of prescribed dogma and to seek the materials for its speculation in metaphysical principles rather than in objective reality." Philosophy took on the characteristics of a game in which argument was indulged in without any reference to the truth of the conclusion and with almost no attempt to observe the facts. It goes without saying that such an attitude meant almost the complete arrest of any real scientific work. Any attempt at an objective study of nature meant that the experimenter was playing into the hands of Satan. Literature abounds in instances in which the honest seeker after the truth by objective study was severely rebuked. Rabelais' doctor Manardi was held to be a dangerous radical when he maintained that in the study of disease attention to the beating of the pulse was more important than speculation as to the position of the stars. Some notion of the position of what might be called the prototype of modern research, may be learned from such legends as that of Faust. Faust, who said, "Here I stand with all my lore, poor fool no wiser than before," was considered a conjurer. Roger Bacon, the lone scientific mind of the thirteenth century, was the victim of twenty years of persecution and imprisonment, and for a long time, long after his death, was held by the common superstitious mind to have been a practitioner of the black arts. Scholasticism aimed at proving that the truth of revelation was also the truth of reason. All ratiocination was an effort to verify conclusions long since decided upon by the church or, in medicine, by Galen. New truth was unwelcome. Scholasticism was ridiculed by Erasmus in his "Praise of Folly," a little book by the great humanist of the latter half of the fifteenth century which we might all read for profit as well as entertainment. Erasmus was a contemporary of many of the schoolmen. After paying his disrespects to them he concludes: "Add to these some of their tenets and opinions, which are so absurd and extravagant that the wildest fancies of the Stoics, which they so much disdain and decry as paradoxes,

seem in comparison to be just and rational; as their maintaining that it is a less aggravating fault to kill a hundred men, than for a poor cobbler to set a stitch on the Sabbath day; or, that it is more justifiable to do the greatest injury imaginable to others than to tell the least lie ourselves. And these subtleties are alchymized to a more refined sublimate by the distracting brains of their several schoolmen; the realists the nominalists, the Thomists, the Occamists, the Scotists; these are not all, but the rehearsal of a few only as a specimen of their divided sects; in each of which there is so much of deep learning, so much of unfathomable difficulty, that I believe the apostles themselves would stand in need of a new illuminating spirit if they were to engage in any controversy with these new divines."

"Whenever obsequious reverence is substituted for bold inquiry, truth, if she is not already at hand, will never be attained," wrote Hallam.*

* * *

It was during the late medieval period that universities came into existence for the first time. The ancient Greeks and Romans had no universities in the sense that the word has been used since the twelfth century. The excellent scholarship of the Greeks was not under the custodianship of institutions of learning. Socrates, Plato and Aristotle gave no diplomas such as a modern student would demand if he attended a certain number of courses of lectures. It was not until the twelfth and thirteenth centuries that the beginning of organized education with which we are familiar today. Since the twelfth century education has travelled a long way. The medieval university had no libraries, laboratories or museums or endowed buildings and no board of trustees or regents. The medieval university was in a very real sense "built of men," yet the historic continuity of the university of the present century with the medieval University of Paris or Bologna is unbroken. The first institutions of learning were the University of Paris 1110; Bologna 1113; Oxford 1167; Montpellier 1167; and Padua 1222. The occasion was the revival of learning which is known as the Renaissance of the twelfth century. (The term is usually applied to the movement to-

*The Story of the Renaissance by W. H. Hudson.

*History of the Middle Ages. Henry Hallam.

wards enlightenment of the fourteenth and fifteenth centuries.) So long as knowledge was limited to the bare elements of grammar, rhetoric, logic, arithmetic, astrology, geometry and music the so-called seven liberal arts of the early middle ages, there could be no universities. During the twelfth century, however, western Europe witnessed an influx of new knowledge through Italy, but largely, as we have seen, through the Arab scholars of Spain in the form of works of Aristotle, Euclid, Ptolemy and the Greek physicians; plane and solid geometry were introduced, which have been taught in schools and colleges ever since. The Arabic numerals, as has been mentioned, took the place of the laborious Roman numerals in mathematical calculation. In law, and particularly in medicine, men had access to the ancient learning which burst the bonds of cathedral and monastery and made the learned professions possible. Medicine was henceforth to be associated with these institutions of learning. To this statement the medical school of Salerno stands out as an exception. Salernum was always during its existence a "City of Hippocrates" and nothing else. Here the medical writings of Hippocrates and his successors were expounded and developed on the side of anatomy and surgery. While, as we shall see, its obscure origin was in the undated past, of Salerno as an academic organization nothing is known before 1231, when the Emperor Frederick II undertook the standardization and regulation of its degrees. It was essentially an institution of medical learning and had no influence on the growth of university institutions.*

* * *

Salerno is situated on the Gulf of Paestum in Italy, about thirty-five miles to the southeast of Naples. By its Latin name Salernum it was first known as a Roman Colony in 194 B. C. It was recognized as a health resort at an early date by the monks of Monte Casino who established monasteries in the city. The establishment of the medical school on a scholastic basis was considered by many to have been due to their influence. Tradition has it also that the famous school was founded by four physicians, namely, a Jew, a Greek, a Saracen and a Latin. The beginnings of the school

are obscure. The first teachers probably never thought of founding a school. Little by little their reputation extended beyond Salerno so that many wandering students were attracted to the town. Cumston believes it is not improbable that the institution developed as a school about the time of the fall of the Roman Empire. There is but very little recorded of it before the year 1000 A. D. The literary activity of the school of Salerno began at about the middle of the tenth century. The Salernitan physician of the time emphasized and reproduced the works of Arabic, Greek and Latin authorities. Their other contributions to medicine were not particularly noted for originality. Among the most prominent men of the school of Salerno were Garipontus (circa 1040), who compiled a work, "Passionarius Galenti," which was for a long time an authority on therapeutics, and Petrocillus, who wrote a work on The Practice of Medicine (1053). The great service rendered the History of Medicine by Garipontus consisted in transmitting to the school of Salerno the writings of the Græco-Latin authors before knowledge of the Islamic writers was introduced.* Among the Salernitan savants must be mentioned Trotula (circa 1059), a woman of noble birth who wrote on obstetrics and gynecology, hygiene and other medical subjects. Her principal work was *De Morbis Mulierum et Eorum Cura*. She is known in medical history as Mother Trot.

The school of Salerno is one of the earliest, if not the first, to adopt the custom of co-education in medicine, for in the fifteenth century we have the names of three other graduates, Costanza Calenda and Abella, who wrote on medical subjects. Abella was the author of two works in Latin verse, "De Naturæ Seminis Homonis" and "De Atrabile." Rebecca Guarna, also a product of this school, lived during the thirteenth century. Among the remedies devised by the lady physicians of the time were one for sunburn, an ointment to keep the hair soft, besides a number of formulæ for purely cosmetic purposes. Astringent injections were employed for leukorrhea, "*Al exsiccandam superfluiditatem matricis, fiat fomentum ex aqua decoctionis ejus (calamentum). Hoc ut testantur mulieres Salernitanæ, satis valet.*"*

*The Subject of the Rise of Universities is very interestingly described by C. H. Haskins of Harvard University.

*Cumston, An Introduction to the History of Medicine.

Other physicians of this school, about 1100, were Johannes Offlacius Bartholomæus, the two Cophons, father and son perhaps, and Ferrarius. The younger Cophon in the early part of the twelfth century wrote on "De Anatomica Porci" the anatomy of the pig, and also a work on practice of medicine. We are informed that Salernitan physicians varied their therapeutic agents in the treatment of disease according to the financial condition of the patient. Medicines were administered in more agreeable form for those who could afford to pay for the more palatable potion. Nicholas Præpositus was director or principal of the Salernitan school about the middle of the twelfth century. He was the author of a pharmacopœa as well as another book called "Quid Pro Quo," which presumably indicated drugs that might be substituted if the original indicated was not in stock. Associated with the Salernitan school is the name of Constantine the African. Born at Carthage, where he attained his young manhood, he is said to have wandered in the Orient for thirty-five years, where he quenched his thirst for knowledge at the medical fountains of Bagdad, India and Egypt. He returned to visit the school of Salerno, where his influence consisted chiefly in introducing the writers of the Islamic School.

* * *

"The best known literary product of the Salerno School," says Francis Packard, "was the famous poem which survived many hundred years in great esteem as a standard textbook, and which is the best known literary survival of medieval medicine." This is known as *Regimen Sanitatis Salernitatum*, first circulated in manuscript copy; twenty editions of it were printed between the years 1480 and 1500. The poem was written for the benefit of Robert, Duke of Normandy, the eldest son of William the Conqueror. Robert passed the winter of 1096 at Salerno on his way to the Holy Land as a crusader. He returned to Salerno three years later to receive treatment for a poisoned wound which he had received. The Regimen was presumed to be of composite authorship but it is generally thought to be the work of John of Nidlau, head of the faculty at the time it was written. It is a handbook of domestic medicine and not a work for the enlightenment of the medical profession. It was written in verse, a custom that prevailed at the time in the dis-

cussion of many subjects. Being copied many times, the text varies; that accepted as most authentic is by Arnold of Villa Nova (1235-1311) who studied medicine in Paris and at Montpellier, where he taught for ten years. The poem is characterized by plain statements of rules on hygiene. The first few lines of the English translation* of the Regimen run as follows:

"Great harmes haue growne, & maladies exceeding,
By keeping in a little blast of wind:
So Cramps and Dropsies, Collickes haue their
breeding,
And Maized Braines for what of vent behind:
Besides we finde in stories worth the reading,
A certaine Romane Emperour was so kind,
Claudius by name, he made a Proclamation,
A Scape to be no lasse of reputation.
Great suppers do the stomacke much offend,
Sup light if quiet you to sleepe intend.
To keepe good dyet, you should neuer feed
Vntill you finde your stomacke cleane and void
Of former eaten meate, for they do breed
Repletion, and will cause you soone be cloid,
None other rule but appetite should need,
When from your mouth a moysture cleare doth
void.
All Peares and Apples, Peaches, Milke and Cheese,
Salt meates, red Deere, Hare, Beefe and Goat:
all these
Are meates that breed ill bloud, and Melancholy,
If sicke you be, to feede on them were folly.
Egges newly laid, are nutritiue to eate,
And roasted Reare are easie to digest.
Fresh Gascoigne wine is good to drinke with meat,
Broth strengthens nature aboue all the rest.
But broth prepar'd with floure of finest wheat,
Well boild, and full of fat for such are best.
The Priests rule is (a Priest rule should be true)
Those Egges are best, are long, and white and new.
Remember eating new laid Egges and soft,
For euery Egge you eate you drinke as oft."

* * *

The school of Salerno became so famous that Frederick II of Sicily decreed that no one should practice medicine in his kingdom who had not passed the examinations given by this institution. To meet the requirements the candidate had to prove that he was legitimate; he must have attained the age of twenty-one years and have studied medicine for at least seven years. The examination tested his familiarity with the works of Hippocrates, Galen, Avisenna and Aristotle. If he passed the examination satisfactorily he was awarded the master's degree. The term "Doctor" was reserved for the professor of medicine.

The founder of modern surgery is said to have been Roger of Parma, a graduate of Salerno. In 1180 he wrote his *Chirurgia*,

*The complete text in Latin and in English is conveniently found in *The School of Salernum* by Harington. Paul B. Hoeber, Inc., Publisher.

the first work on surgery. In addition to the course prescribed in medicine the candidate for surgery was required to study anatomy for a year. Roger employed ligatures if cauterization failed to check hemorrhage. He used sutures, employed setons for counter-irritation. He broke bones in order to obtain good results from badly united fractures. Roger was followed by Roland of Parma, who was not more than a disciple. Salerno was the first independent medical school of the time following that long dreary period of inertia—the Dark Ages. To quote Garrison, "Its anatomy was based upon that of swine, its physiology and pathology were Galenic, its diagnosis mainly pulse and urine lore, but diseases were studied first hand, in a straightforward, spontaneous, engaging manner; therapy was rational, with an effective scheme of dietetics; Salernitan surgery was new and original; obstetrics and nursing were cultivated by talented women." Sudhoff expresses the same opinion, namely the teachers of untold generations and Salernitan graduates did not delve so deeply into book lore so much as practical knowledge, openmindedness and personal experience at the sick bed. Salernitan masters, according to Neuburger, were the first medieval physicians to cultivate medicine as an independent branch of science.

Interesting are the following scraps of advice attributed to Salernitan practitioners:

"When called to a patient commend yourself to God and to the Angel who guided Tobias. On the way learn as much as possible from the messenger, so that if you discover nothing from the patient's pulse or water, you may still astonish him and gain his confidence by your knowledge of the case. On arriving ask the friends whether the patient has confessed, for if you bid him do so after the examination it will frighten him. Then sit down, take a drink, and praise the beauty of the country and the house, if they deserve it; or extol the liberality of the family.

"Next proceed to feel his pulse, remembering that it may be affected by your arrival, or, the patient being a miser, by his thinking of his fee. Do not be in a hurry to give an opinion for the friends will be more grateful for your judgment if they have to wait for it. Tell the patient you will cure him, with God's help, but inform his friends that the case is a most serious one.

"Look not desirously on the man's wife, daughter or handmaid for this blinds the eyes of the physician, deprives him of the divine assistance and disturbs the patient's mind."*

It must be remembered that the thirteenth century witnessed the beginning of the Ren-

aissance movement which was to transform European life and thought. With the progress of the Renaissance the School of Salerno began to decline as the torch of knowledge was carried to other institutions, to Padua, Montpellier and Paris. The University of Naples gradually obscured its sister school, which was finally abolished in 1811 by decree of Napoleon. Not a trace of the School of Salernum was to be found by Daremberg, who visited Salerno in 1848, at which date the medieval institution of learning appeared to be absolutely unknown to the inhabitants.

A SURGEON OF DISTINCTION

(The Nation)

The late Dr. William W. Keen had a rare personality and tremendous ability. Hence he was bound to make his way in any walk of life. His was an open mind toward new developments in his own profession, which is a rare attribute in any profession—especially among the medicos, we should be tempted to say, if we did not know so many editors. A distinguished surgeon, Dr. Keen will perhaps be best remembered for his operation for sarcoma of the jaw on President Cleveland on July 1, 1893, on Mr. E. C. Benedict's yacht Oneida as it steamed through Hell Gate. This was so concealed that, incredible as it seems, not a reporter suspected, and nothing leaked out about it for twenty-four years, when Dr. Keen published the details. But Dr. Keen deserves far greater fame for his distinguished teaching in three colleges, his early championship, against tremendous opposition, of antiseptic surgery in this country after the Lister discoveries, and his own important labors in insisting upon the use of paratyphoid inoculation in our armies. In addition to this he wielded an admirable pen which interested laymen as well as the medical profession. His ninety-five years, full of genuine service to humanity, are remarkable in themselves and because they more than span the triumphant rise of modern surgery.

A SUGGESTION FOR CONGRESS

(Kalens)

The Congress has tried for weeks to balance the budget. The job could have been done by any six men of average intelligence in thirty minutes. Two legislative acts would have accomplished it, neither requiring long explanation or debate: (1) The legalization of 2¾ per cent beer. This beverage is not intoxicating. An appropriate tax would yield some four or five hundred million. (2) The lopping-off of the provision of medical care for men who wore the uniform but never saw action, whose disabilities post-date the war, and for their families. This would save nearly half a billion.

THAE YOUNG DOCTORS

Sandy, hae ye seen how prood an' conceited like a lot o' thae young chaps in medicine are? They're a' th' time shawin' their importance.

Ye see, wi' their two years an' mair in college, an' another ane or twa in some hospital, they think they hae far mair knowledge than ony o' us auld fellows.

Just think o' a' the new remedies they are sae fond o' tellin' aboot. There's that ane they ca' Amylamymethylesterethylhydroaldehyde o' sodæ,—

*From *De Adventu Medici* (The Doctor's Visit) Translated by Dr. E. T. Withington.

A' weel, when they get a' thae things thegither in ane dish, they canna tell what they hae, especially we amy (aimee) in it, but onywa' we used to ca' it saleratus for short. It was cheaper tae ca' it that.

Aye, an' think o' a' the new diseases thae chaps are finding out aboot. Ye mind we were satisfied we' bilious fever, malaria, pneumonia an' the common cauld, but noo these baby doctors o' medicine are av' speerin' us about the ane they ca' agranulocytosis angina. They thoct we couldna pronoonce it. Weel, maybe we canna sae it right, but we can sing it. Aye, we can sing it tae the tune o' auld hundred. Let's show them. Noo a'thegither. Sing.

Should auld acquaintance be forgot,
An' never brocht tae min',
Agranulocitotica,
Is nae sae bad a line.

Praise God frae whom a' blessin's flow,
A gran u lo cy to ti co
Is a' the bunk an' fun tae us,
Noo, let the bairn medics cuss.

—WEELUM.

MEDICAL ECONOMICS

MEDICINE TODAY AND TOMORROW

The following is a signed editorial which appeared in the Annals of Internal Medicine for March, 1932. The writer is Dr. Burton R. Corbus, Chairman of the Executive Committee of the Michigan State Medical Society. Those members of the Michigan State Medical Society who are Fellows of the American College of Physicians have doubtless read it in the Annals. There are many, however, who do not come under this category, for which reason we reprint it under the above heading.—Ed.

Old General Depression lays his hand heavily on our profession and the average doctor somewhat suddenly awakens to the fact that all is not well and that "something must be done about it."

For some time he has sensed forces at work which, in their operations, were detrimental to him. In a more or less academic way he has read, in lay magazines, articles which indicated an unrest on the part of the public, criticisms of the doctor, the hospitals, protests against the cost of medical care. In professional magazines he has read articles by those who are looked upon as leaders of his profession, expressing a concern about the situation, but except where encroachment here and there has hit his income directly, he has gone on his busy way unconcerned, or at least not sufficiently concerned to do more than scold about an irritating situation.

Certainly he has not been truly conscious of the strong social movement which is now in the air. In his address to the College of Surgeons, Dr. Angell speaks of the new philosophy "which conceives the social order as under binding obligation to give its members wholesome conditions of life . . . which conceives human life as indisputably superior to money or physical property in any form." We must listen attentively to his conclusions, that "in the long run, by hook or by crook, society will demand competent medical and nursing service, adequate in amount to meet the needs of everyone. If it cannot secure these as the result of measures voluntarily devised and perfected by the profession and its interested friends, it will look to other agencies, and

notably to the Government, to produce the desired results."

The entire world is in a state of flux. In finance, in religion, in constitutional law, as well as in medicine, we seem to be in an irresistible stream, the course of which is uncharted and the end not in sight. It is a period of maladjustment, and a period in which maladjustments long existent are being emphasized. Re-adjustments become a necessity and with these re-adjustments comes the opportunity for the correction of maladjustments, many of them of long standing and of very gradual growth.

It is a time for those who, by reason of official position or by reason of unusual ability, are the leaders of our profession to put their minds together and help us to chart our course. It is not the time for reactionary impulsive action, impractical experiments, or challenging attitudes. We must be on guard against impractical panaceas which come either from within or from without the profession, and hope that no such panaceas will obtain legislative approval.

It is not unlikely that there is to be a distinct change in the character and type of medical practice in the next generation. A variety of social movements affecting medicine are under way, and their development is not to be stopped. State medicine is edging its way in and is not to be entirely kept out. That concessions must be made, compromises accepted, must be recognized by the rank and file of the profession. It will be the obligation of our leaders to guide, so far as they may, these movements, and to advise us when such concessions are necessary and compromises essential.

The action of the California Medical Society with its proposed public relations office with paid secretary and corps of assistants, and the Michigan plan for a survey of medical activities within the state, indicate that medicine is not unmindful of its obligations.

If state medicine is not to come, if institutional practice is not to be more common than it is now, if charitable clinics and governmental medical agencies are not to continue their progressing encroachments, then the rank and file must not be content with this shifting of responsibility to their leaders, but must do their part as individuals. Open warfare against all clinics, good and bad, and social movements of various sorts whose objective is the care of the sick, will not only be futile, but is certain to be detrimental to the entire professional body. Charitable clinics, however much they permit abuses, however much they may impinge on the individual's practice, have a legitimate objective and were started with the best of intentions. Over-enthusiasm, sincere enough, and over-ambition on the part of a paid secretary, are usually responsible for the over-activity and the associated abuses. The individual doctor may do much through personal contact with his acquaintances and patients who are members of lay boards. Properly approached they cannot fail to recognize that the doctor has an interest at least equal to their own in community welfare. It might be well to remind them that these clinics are dependent on the doctor for their very existence, and that the public is today asking the doctor to carry a disproportionate philanthropic load as compared with other individuals in the community.

The obligation rests upon medicine: first, to do its part in making the doctor more competent to fulfill his obligation to his patient and to the community, and second, to direct educational presentations to the public, to the end that the public shall more properly evaluate the doctor's services, and realize the extent of its dependence upon him for good health and happiness. We must have our finger

in the pie. Through our representatives we must be in a position to guide where we may this evolutionary process. Society and the profession will equally benefit if this evolution proceeds sanely and along such lines as will permit the medical profession to maintain its ideals and continue to endow mankind with discoveries, and with the application of discoveries, such as have, in the past, brought so much of health and happiness into the world. The way must be found for these things to be maintained, with the doctor leading a truly independent life, assured of sufficient income to make it possible for him to give the best that medicine has to offer to his patients, and to make life for him reasonably happy and satisfactory. The way will come if the profession will only maintain a unified front. We have ever shown a lack of real cohesiveness. Individualists by training and temperament, we have never been willing to play the game as a group. As this new social order comes into being, adjustments will be difficult, and some sacrifices will be necessary and imperative. This must be recognized and accepted.

COMMUNICATIONS

June 16, 1932.

Secretary,
Michigan State Medical Society,
Dear Doctor Warnshuis:

At a recent Board meeting a resolution was adopted recommending the publishing of the enclosed correspondence regarding "short time" licenses in the state, regarding which there seems to be considerable misinformation among the medical profession at large.

Yours very truly,
NELSON McLAUGHLIN, Secretary.
Potoskey, Michigan,

June 2, 1932.

Dr. J. E. McIntyre,
Lansing, Michigan.
My Dear Doctor:

This is the time of the year when the State Board of Registration of Medicine is deluged with requests for short time licenses to practice in the resort districts of Michigan.

You live in a resort region and know what it means to have men from outside the state come in for two months in the summer and skim the cream of this resort business.

As a personal favor to me I wish you would take time to write to the secretary of the State Board, protesting against short time licenses in the resort district of Michigan. If we all get together on this matter I am sure we can persuade the State Board to see things in our light. I am also bringing the matter to the notice of the Northern Michigan Medical Society and I am sure that they will protest the short time license and will request the State Board not to issue such licenses.

Thanking you very much for the attention you may give this matter, I remain,

Very truly yours,
(Signed) B. H. VAN LEUVEN, M.D.,
Councilor, 13th District.

June 2, 1932.

Secretary, State Board of Registration in Medicine,
Lansing, Michigan.
My Dear Sir:

I wish to call your attention to the fact that this is the season of the year in which your department

is deluged with requests to practice medicine in Michigan during the resort season.

On behalf of myself as Councilor of Northern Michigan and on behalf of the Northern Michigan Medical Society I wish to protest to your honorable body the further licensing of men from outside of the state to practice medicine in our resort territory during the summer season. These men come in here and pose as specialists and what not and make their summer expenses out of the resort region. This is obviously unfair to the men who live in these districts and support the county and state medical societies. It would be very gratifying to me and the Northern Michigan Medical Society if your board would refuse to license men who are obviously only going to practice here in the summer. There is absolutely no objection to issuing licenses to men who intend to locate here permanently and practice the year around.

Again asking your kind consideration of this matter, I remain,

Very truly yours.
(Signed) B. H. VAN LEUVEN, M.D.,
Councilor, 13th District.

June 16, 1932.

Dr. B. H. Van Leuven,
Potoskey, Michigan.
Dear Doctor Van Leuven:

We have your communication of June third, also one of the same date addressed to Dr. J. Earl McIntyre, President of this Board.

First, I want to call to your attention the fact that there are no "short time" licenses issued in Michigan: qualified practitioners are entitled to registration, but this is a permanent registration, neither "temporary" nor "short time" licenses being possible under our Medical Practice Act.

Second, contrary to general opinion we receive very few applications from physicians who wish to practice in the summer resorts of the state. Looking over our files for the past six months I find only three inquiries from men who state that they have summer homes in Michigan and wish to practice while in residence here. Each of these applicants was advised that their licensure was a Board matter and could be considered at any of the regular business meetings of the Board of Registration in Medicine. To date none of these three physicians has filed a formal application for consideration and, therefore, these requests cannot be considered as bona fide applications for licensure.

It rather appears to me that the persons complained of are either unregistered practitioners, or must have obtained registration years ago and are now able to seek more comfortable surroundings during the summer months. In the latter case there is little that can be done; I doubt very much that you could legally restrict the practice, as regards location, of a properly qualified, registered physician. In the former case, a complaint (properly substantiated by facts) to the local prosecuting attorney should bring the relief sought.

If you will advise the names of any persons practicing in your locality whose registration is in doubt, we shall immediately notify you of their status with this Board.

Yours very truly,
NELSON McLAUGHLIN, Secretary.

P. S. I hope you will not hesitate to supply us with the names of, and any other information you may have regarding persons whom you may suspect are practicing illegally in any of the resort sections, as such communication will be considered confidential insofar as the person reporting them is concerned.

July 5, 1932.

To the Entire Staff of Blodgett Memorial Hospital:

In line with present-day conditions and in an effort to reduce the cost of medical care for the individual patient without depriving him of any service necessary to his welfare, we have instituted a multiple nursing service at Blodgett Memorial Hospital. Patients cared for on this service will receive approximately one-half of the time of a graduate nurse and will in consequence pay one-half of the normal fee. The charge for two patients, for example, would be: \$3.00 per day for 12 hour service for each patient and each patient would be charged 50c per day for nurses' board. We have arranged to utilize any free time of these nurses for floor service so that it is not necessary for you to have more than one patient who desires this service before requesting this care. Twenty-four hour service on multiple nursing would be rendered by a day nurse and a night nurse with a cost to the patient of \$7.00 per day, including the nurses' board.

We have selected competent nurses for this service and we recommend it particularly for those patients for whom you wish a somewhat more detailed service than the floor nurses are able to provide, although your patient does not require the full time of a graduate nurse. Requests for this service should be made to the Nursing Office.

Very truly yours,
D. M. MORRILL, M.D., *Director.*

GENERAL NEWS AND ANNOUNCEMENTS

Dr. J. G. Huizinga has removed from Grand Rapids to Holland.

Dr. R. Earle Smith, Grand Rapids, has moved his offices to the Ashton Building.

The dates for the next A. M. A. meeting are June 12 to 16, 1933, in Milwaukee.

Dr. E. H. Nesbitt, Grand Rapids, has been appointed Director of City Welfare by the City Manager. Dr. Nesbitt will continue his duties as Superintendent of the City Tuberculosis Hospital.

Drs. Ferris Smith, H. S. Collisi and F. C. Warnshuis have been appointed as Police and Fire Surgeons in Grand Rapids.

Dr. J. Van Becelaere of San Diego, California, was a visitor in Detroit recently. Dr. Van Becelaere is an old Detroit physician. A few years ago he settled in California. He is now Assistant Editor of the Western Medical Times, the office of publication of which is Denver, Colorado.

The American Roentgen Ray Society will hold its Thirty-third Annual Meeting at the Book-Cadillac Hotel in Detroit, September 27, 28, 29 and 30.

OBITUARY

DR. NEAL L. HOSKINS

Dr. Neal Hoskins of Detroit died at his home, 135 Monterey avenue, on July 21, after about a year's illness of cancer of the sigmoid. He was born in Lisbon, N. H., in 1878. After attending schools of his native town he spent four years in Dartmouth College, graduating with the degree of B.A. He entered the University of Michigan in 1901 but completed his medical work and took his degree of M.D. at the Detroit College of Medicine in 1905. Following his graduation he was an interne at Harper Hospital for one year; then followed a year of post-graduate studies abroad, chiefly at Berlin, Germany. In 1908 he became associated with Doctors Angus McLean, Don M. Campbell and Andrew P. Biddle in an office on Fort street, West, Detroit.

Dr. Hoskins was a member of the staff of St. Mary's Hospital until the time of his illness, his specialty being internal medicine, and for a number of years professor of medicine at the Detroit College of Medicine and Surgery. In his teaching he was particularly successful. He had a large and seasoned clinical experience and had that peculiarly happy faculty of impressing his students so that there was seldom an absentee during his lecture period. As a bedside clinician he was always cheerful and hopeful. While excelled by few as diagnostician, Dr. Hoskins felt that one of a physician's first duties was to make his patient comfortable in mind and body, and as a result he had a large and loyal practice. He was the first house physician of the old Ponchartrain Hotel, Detroit. Here he met and ministered to a variety of people. He was particularly popular with persons associated with the circus and with the theatres and symphony orchestra, who were appreciative of his efforts to serve. To follow the circus for a month each year was an avocation to which he looked forward with keen anticipation. He was a member of the Scarab Club. During the autumn weeks he was accustomed to seek his native hills of New England where he spent many hours with his brush. Dr. Hoskins was a landscape artist of very high merit. He worked hard and played hard. He was a true and loyal associate and a valued consultant. He was a member of the Wayne County and Michigan State Medical Societies and the American Medical Association. He leaves his wife, who was Miss Emily Streube of Sandusky, Ohio, and one brother, Carl S. Hoskins of Lisbon, N. H. The remains were taken to his old home for interment.

DR. JAMES E. BURGESS

Dr. James E. Burgess of Detroit died at his summer home near Pontiac only July 6 of a heart attack. A month ago he suffered three broken ribs and collar bone in an automobile accident and had been in poor health since that time. Dr. Burgess was Coroner of Wayne County for twenty years. He was born in Drumbo, Ontario, in 1866. He was graduated from Woodstock College and in 1893 received his medical degree from the Michigan College of Medicine and Surgery. In 1889 he married Gladys M. French of Wolverton, Ontario. She and one son survive. Dr. Burgess was a member of the Wayne County and Michigan State Medical Societies.

SOCIETY ACTIVITY

UPPER PENINSULA MEDICAL SOCIETY, SAULT STE, MARIE

Thursday, August 11th

10:00 A. M.

Welcome by Mayor Andrew J. Short
Response—Dr. Manthei, President of U. P. Society

Dr. Waldie—Tuberculosis, Symptomatology vs. Pathology

Dr. Twohy—Collapse Therapy in Tuberculosis

Dr. Alexander of Iron Mountain—Phrenectomy

Discussion by Dr. Leslie of Howell, Mich.

1:30 P. M.

Office Caution—treatment of Endocervicitis—Dr. Maloney of Ironwood

2:00 P. M.—Thyroid Surgery—Dr. Shawn, Detroit

3:00 P. M.

Fractures—Dr. Lafferty, Detroit

4:00 P. M.

New phases in Gynecology—Dr. Gardiner, Chicago

Friday A. M.

Dr. Angus McLean
Dr. Louis Hirschman
Dr. J. Milton Robb

Ladies—

Luncheons 11th and 12th

Cars for sightseeing

Bridge

Golf—

U. P. Medical Championship under wing of Dr. F. C. Bandy

COMMENTS

Your patronage of our advertisers is urged. Advertisers rightly expect your business and without it they naturally will terminate their advertisements. The Journal requires this financial income to continue publication. Respond to the advertisements in this issue.

Contact your local candidates for election to public office. Inform them as to the problems of medical legislation and obtain a statement as to their attitude.

Public Relation Committees of County Societies are urged to expedite sending in the reports requested from them. It is desired to complete our State Survey as promptly as possible. Members should return questionnaires promptly.

The September issue will contain the completed program for our annual meeting in Kalamazoo,

Sept. 13-15. No member can well forego attendance. A list of local hotels is imparted in this issue. Write for your reservations and do not be deterred from attending. It will be to your personal interests to be present.

The service of the Secretary's office is at your disposal. Your inquiries and requests will be given prompt attention. Your correspondence is invited.

Beware of collection agencies. Do not fall for their representations. Do not sign a contract unless you fully understand its terms.

By reason of experience the warning is again given to always protect yourself by means of several X-rays and consultants when attending fracture cases. Keep an accurate case record. In all serious illnesses and undetermined diagnoses request consultation. This is a day in which suits are started upon the most trivial claims.

AUGUST DAYS

Depressions have no effect upon passing days—they slip by as rapidly as they did in 1929 or 1829. The "note due day" is upon us seemingly ere our signature has dried. December and January will be upon us before we are aware. That is why we should utilize these lean August days to put our house in order for winter's cold and needs.

Get out the old ledger—even if it does make you cuss at some unappreciative patient—make out a statement for every account, place them in a bill-fold and in your pocket. Then call on those who owe you and present them with two opportunities: to pay you in full or to arrange a plan of payment.

In a plan of deferred regular payments, first secure a note for the amount due you—a regular note form or use the form we submit below. Securing a note is securing an acknowledgment of indebtedness and will be accepted in court without further evidence. With the note secured then obtain an agreement as to when and how payments are to be made.

Thus fortified you have more collectible assets than those recorded in your ledger. Secondly, your banker will accept these notes as collateral, may even advance you funds and will act as your collecting agent. Lastly these notes will not be outlawed as will your ledger accounts.

We urge that each member utilize leisure August days to square away ledger accounts.

\$....., 19.....
.....after date for value received.....promise to
Pay to the order of..... Dollars
at with interest
at per cent per annum after.....until paid.
And to secure the payment of said amount.....
hereby authorize, irrevocably, any attorney of any
Court of Record to appear forin such Court,
in term time or vacation, at any time after maturity,
and confess a Judgment without process, in favor
of the holder of this Note, for such amount as may
appear to be unpaid thereon, together with costs and
.....dollars attorney's fees, and to waive
and release all errors which may intervene in any
such proceedings, and consent to immediate execution
upon such judgment, hereby ratifying and confirming
all that.....said attorney may do
by virtue hereof.

No.....Due.....

RESOLUTIONS

The Michigan State Nurses Association, at its Annual Meeting convening at Saginaw, May 5, 6, and 7, 1932, presents the following resolutions.

BE IT RESOLVED that the Michigan State Nurses Association congratulates the committee on a varied, timely, and interesting program; appreciates the cordial hospitality extended to it by the nurses of the Saginaw District; thanks our Saginaw friends who have so graciously contributed to our entertainment; and recognizes the very satisfactory publicity given the convention by the Saginaw Daily News.

WHEREAS it is evident that the number of graduate nurses far exceeds the demand,

BE IT RESOLVED that every effort be made to decrease the number of student nurses and to improve the quality of those accepted by greater attention to the educational qualifications, personality, health, and social background of those selected.

WHEREAS changing conditions demand a more definite preparation of the nurse for community service,

BE IT RESOLVED that schools of nursing correlate their theoretical and practical instruction to provide training suitable to meet the needs.

WHEREAS unemployment is especially marked among the private duty group,

BE IT RESOLVED that active coöperation and intelligent effort be given toward making the distribution of nursing service conform to community needs.

WHEREAS economic conditions are concentrating attention on the appraisal of all welfare activities,

BE IT RESOLVED that at this time the public health is in special need of conservation, and curtailment of public health activities is not economically sound.

WHEREAS all groups are bending every effort toward ameliorating suffering and want,

BE IT RESOLVED that nurses contribute interest and assistance to community welfare projects.

WHEREAS thoughtful consideration is being given to the ever-increasing cost of medical care,

BE IT RESOLVED that the Michigan State Nurses' Association coöperate with the Michigan Hospital Association, the Michigan State Medical Society, the Michigan State Dental Society, and the Michigan Education Association, in attempting to solve the common problems involved in our service to the public.

Respectfully submitted,
ELIZABETH WESTENDORF
MARIAN DURELL
WILKIE HUGHES
EMILIE SARGENT
ELIZABETH P. ROBINSON, *Chairman*

AMEBIC GRANULOMAS OF LARGE BOWEL: CLINICAL RESEMBLANCE TO CARCINOMA

Herbert Gunn and Nelson J. Howard, San Francisco, report three cases of amebic granuloma of the large bowel. They assert that the pathologic process consists in persistence of an isolated chronic ulcer with progressive erosion of the wall of the bowel. In response to the amebic ulceration and secondary infection, large amounts of edematous fibrous granulation tissue appear. This process affects the entire bowel wall and the neighboring mesocolic fat. As a consequence, tumor masses are formed. These granulomas may be easily mistaken for carcinoma, for they give symptoms, physical signs and radiologic appearances that may be identical with those produced by carcinoma. *Endameba histolytica* is world-wide in its distribution, and infections with it do not necessarily produce diarrhea or dysentery.—*Journal A. M. A.*

COUNTY SOCIETIES

ANTRIM, CHARLEVOIX, EMMET, CHEBOYGAN COUNTIES

Minutes of July Meeting

The July meeting of the Northern Michigan Medical Society was held at the Perry Hotel, Petoskey, Thursday, July 14, with an attendance of nineteen members and two guests. After partaking of a chicken dinner the meeting was called to order by the President. Minutes of last meeting were read and approved. Report of Public Relations Committee was heard.

The following motions were made and carried: (1) That the fee bill as presented by the Cheboygan Poor Committee for the care of the indigent of that county be accepted by the doctors of that county temporarily. (2) That the fee bill and plan made by our Public Relations Committee be submitted to the Boards of Supervisors of the various counties and their opinion obtained and some agreement be worked out with them.

The business of the evening was then laid aside and the program taken up. This consisted of a number of talking pictures showing the anatomy of the female pelvis and related structures. This was followed by several reels showing the various operations on the female organs. The series was very interesting and well enjoyed by the members. It was given by the Petrolagar Laboratories through their representative, Mr. Ricketts.

Dr. Christie of Cheboygan was appointed to the Program Committee for the month of August. Meeting adjourned.

GRATIOT-ISABELLA-CLARE COUNTY

The May meeting of the Gratiot-Isabella-Clare County Medical Society was held in the Wright Hotel, Alma, Thursday, May 26th. Eleven members and three visitors had dinner together. Two members came in after dinner.

President Burt called the meeting to order. The minutes of the previous meeting were read and approved. Motion was made and carried that we do not hold a meeting in July and August. Some communications were read.

President Burt then introduced Doctor O. W. Lohr from Saginaw, who gave a demonstration of how photography can be used to show pathological specimens both in the gross and microscopical pathology. The Doctor showed pictures of nearly every part of the human body that had been either injured or diseased.

Dr. T. J. Carney discussed and complemented Doctor Lohr's presentation.

On behalf of the Society President Burt thanked Doctor Lohr for his kindness in bringing this interesting demonstration to our Society.

Meeting adjourned.

The June meeting of the Gratiot-Isabella-Clare County Medical Society was held in the Wright Hotel, Alma, Thursday, June 16th. Fourteen members and twenty-one visitors had dinner together.

Vice President Carney called the meeting to order. The minutes of the previous meeting were read and approved.

Doctor Carney then introduced Doctor Norman F. Miller, Professor of Obstetrics and Gynecology at the University of Michigan, who talked on "Le-

sions of the Cervix and Their Treatment." The doctor first described the different lesions in detail, then showed some lantern pictures to illustrate the most essential points in the treatment, then taking up the Medical and Surgical Treatment of the different lesions. The Doctor's talk was discussed by Doctors Hart, Hobbs, Toshack and others.

On behalf of the Society Doctor Carney thanked Doctor Miller for his kindness in bringing this interesting discussion to our Society.

Meeting adjourned.

E. M. HIGHFIELD, M.D., *Secretary*.

WAYNE COUNTY

The Blackwell Society, an organization composed of the women physicians of Detroit, Michigan, has presented to the Wayne County Medical Society of Detroit a large American flag which hung in front of the Society's new headquarters, 4421 Woodward at Canfield, for the first time on Independence Day. The flag measures ten by fifteen feet and is made of unbleachable wool.

The Program Committee is working on the new program for the 1932-33 season of the Wayne County Medical Society. The Tuesday evening programs will again be resumed in October. Members of the Michigan State Medical Society are cordially invited to attend these meetings when visiting Detroit.

The WWJ broadcasts of the Wayne County Medical Society are given every Tuesday evening from 5:45 to 6:00 o'clock.

The Seniors Club of the Wayne County Medical Society has accepted the golf challenge of the Noon Day Study Club and will hold their tournament at Meadowbrook Country Club on August 3.

The Noon Day Study Club held their First Annual Golf Tournament at Tam o' Shanter Golf Club on June 15. Forty-three members and guests were present and enjoyed eighteen holes followed by dinner and presentation of prizes. Dr. A. P. Wilkinson was winner of low gross with an 86. Dr. E. A. Bicknell was runner up with a 90. Dr. A. E. Schiller won third low gross with a 90.

The Cafe of the Wayne County Medical Society has inaugurated a new menu which is enjoying great popularity among the doctors of Wayne County. The new policy emphasizes food at lower prices and offers an array of hot-weather combinations that "click" in taste and economy. When you are visiting in Detroit, why not drop into the cafe among home-like surroundings with your Wayne County friends?

The Periodic Health Examination Committee of the Wayne County Medical Society has prepared an examination blank which has been printed and is now on sale in the Executive Office. These special blanks sell for \$1.00 the pad of 100, 500 for \$4.00, or 1,000 sheets for \$7.00. Members of the Michigan State Medical Society may write the Executive Office 4421 Woodward Ave., Detroit, enclosing check, and blanks will be mailed immediately.

WOMAN'S AUXILIARY, MICHIGAN STATE MEDICAL SOCIETY

MRS. J. EARL MCINTYRE, President, Lansing
MRS. W. E. McNAMARA, Secretary Lansing

TO COUNTY PRESIDENTS

The Sixth Annual Convention of the Michigan State Medical Society Woman's Auxiliary will be held at Kalamazoo, September 13, 14 and 15, 1932.

According to the Constitution, "Each County shall be entitled to be represented at the meetings of the organization by any members in good standing. Each Auxiliary shall be entitled to one delegate for each twenty-five members or major fraction thereof, who shall constitute the voting poll of the session.

"Written annual reports shall be made by all committees.

"A regular meeting of the board shall be held immediately before each annual meeting of the organization."

At 10:00 A. M. Wednesday, September 14, all presidents of Auxiliaries are invited to a Round-table at the Hotel Burdick. We earnestly hope that all Presidents will avail themselves of this opportunity of not only meeting each other, but of discussing problems, interchanging ideas, and informally receiving valuable assistance in their work.

The Executive Board meeting occurs at 12:00 o'clock at the Hotel, and the annual luncheon at 1:00 o'clock at the Kalamazoo Country Club.

Our luncheon guest speaker will be Dr. F. C. Warnshuis, who needs no introduction to our Auxiliary members. We feel that Dr. Warnshuis's talk will be a source of information and enjoyment, and we are particularly fortunate in securing him for our speaker.

Following this occurs the regular annual business meeting, including reports of all standing committees, election of officers, etc.

I am enclosing a blank for your delegate, which must be signed by your President and Secretary, and presented to the credentials committee at Kalamazoo.

Mrs. R. A. Morter, who is General Chairman of the arrangements committee for Kalamazoo, has planned many delightful entertainments for us: a Coöperative Dinner at her home on September 13; a Dinner-Dance at 6:30 on September 14, and drives to various points of interest and a club luncheon on September 15.

Kalamazoo is doing everything to make this a successful convention. I hope we may have a large attendance and endeavor to make this annual meeting better than any preceding one.

PROGRAM

Tuesday, September 13—Coöperative Dinner at the home of Mrs. R. A. Morter, Oakland Drive, with visiting women as guests.

Wednesday, September 14—

10:00 A. M.—Presidents' Conference, Hotel Burdick.

1:00 P. M.—Auxiliary Luncheon, Kalamazoo Country Club, followed by annual business meeting.

Thursday, September 15—

10:00 to 12:00 A. M.—Visit to Parchment Paper Company.

12:30 A. M.—Club Luncheon at Y. W. C. A.

2:00 P. M.—Visit to Upjohn Pharmaceutical Company.

Drives around the city are also planned for members not attending other meetings.

General Arrangements Committee: Chairman, Mrs. R. A. Morter, Mrs. John McGregor, Mrs. William Shackleton, Mrs. R. J. Hubbell, and Mrs. Walter den Bleyker.

OAKLAND COUNTY—PONTIAC, MICHIGAN

President.....Mrs. Robert H. Baker, 57 Cherokee
Vice President

Mrs. Palmer E. Sutton, 1138 York, Huntington Woods
Secretary-Treasurer.....Mrs. Hubert M. Heitsch, 549 Perry St.

INGHAM COUNTY—LANSING, MICHIGAN

President.....Mrs. H. S. Bartholomew, 902 W. Michigan Ave.
Vice President.....Mrs. P. C. Strauss, 1518 W. Michigan Ave.

Sec'y-Treas.....Mrs. T. P. Vander Zalm, 112 S. Jensen Ave.

JACKSON COUNTY—JACKSON, MICHIGAN

President.....Mrs. George Seybold

Vice President.....Mrs. Walter Finton

Secretary.....Mrs. Miar McGoffin

Treasurer.....Mrs. Ennis Corley, 1009 Third St.

SAGINAW COUNTY—SAGINAW, MICHIGAN

President.....Mrs. S. A. Sheldon, 2 Holland Court

Secretary.....Mrs. D. H. Swengel, 901 Emerson St.

Treasurer.....Mrs. W. K. Slack, 5 Jefferson Court

BAY CITY COUNTY—BAY CITY, MICHIGAN

President.....Mrs. C. A. Stewart

First Vice President.....Mrs. H. P. Lawrence

Second Vice President.....Mrs. E. A. Wittner

Secretary.....Mrs. Ray Perkins

Treasurer.....Mrs. H. M. Gale, 517 N. Van Buren St.

Corresponding Secretary.....Mrs. Charles M. Swantek

KALAMAZOO—KALAMAZOO, MICHIGAN

President.....Mrs. Walter Den Bleyker, 513 S. Burdick St.

First Vice President.....Mrs. W. O. Jennings, 442 Stuart Ave.

Second Vice President.....Mrs. I. W. Brown, 2335 S. Rose St.

Secretary-Treasurer.....Mrs. Frederick M. Doyle, 1219 Maple St.

CALHOUN COUNTY—BATTLE CREEK

President.....Mrs. R. C. Stone, 120 Garrison Ave.

First Vice President.....Mrs. M. J. Capron, 102 Ann Ave.

Second Vice Pres.....Mrs. Theo. Kolvoord, 137 Frelinghuysen

Secretary.....Mrs. G. W. Brainard, 204 Chestnut

Treasurer.....Mrs. B. G. Holtom, 94 Central

WAYNE COUNTY—DETROIT, MICHIGAN

President.....Mrs. R. E. Loucks, 337 W. Grand Blvd.

Vice President.....Mrs. Claire Straith, 19305 Berkley Road

Recording Sec'y.....Mrs. Zina Bennett, 4909 Buckingham Ave.

Corresponding Sec'y.....Mrs. L. O. Geib, 3860 St. Clair Ave.

Treasurer.....Mrs. William Riemann, 7919 Kercheval Ave.

Custodian.....Mrs. L. T. Henderson, 713 University Place

PATHOLOGY AND TREATMENT OF CORNEAL ULCERS

Oscar B. Nugent, Chicago, prefaces his discussion of the pathology and treatment of corneal ulcers with a brief review of the history of five layers of cornea. The surface corneal epithelium is passes the surface cells of the cornea, less resistance is encountered in the basement epithelial cells. Bowman's membrane becomes thinner and readily quite resistant to germ invasion, but, when infection disappears under the influence of active germ invasion, thus offering little resistance to its progress. The potential lymph spaces of the corneal stroma rapidly fill with inactive or dead leukocytes and fibrous exudate, blocking the progress of repair and inviting further necrosis. Descement's membrane becomes thicker under the influence of inflammation and is most resistant to the process of necrosis. Corneal necrosis is mostly due, either directly or indirectly, to bacterial invasion. Ultraviolet irradiation is made more efficient because of the transparency of the cornea, which offers little resistance to the entrance of the ray. Sterilization of the necrotic and perinecrotic area is most efficiently accomplished by the Birch-Hirschfeld carbon arc lamp, and regeneration of new epithelial cells to cover the area is quite rapid. Scar formation is greatly reduced, and the resulting scar is thinner, as the result of rapid filling with epithelium, which, in a measure, prevents scar formation.—*Journal A. M. A.*

THE DOCTORS' LIBRARY

SURGICAL CLINICS OF NORTH AMERICA. (Issued serially, one number every other month.) Volume 12, No. 3 (Lahey Clinic Number—June, 1932), 299 pages with 123 illustrations. Per clinic year (February, 1932, to December, 1932.) Paper, \$12.00; cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1932.

THE MEDICAL CLINICS OF NORTH AMERICA. (Issued serially, one number every other month.) Volume 15, No. 2. (Chicago Number—November, 1931.) Octavo of 227 pages with 53 illustrations. Per Clinic year (July, 1931, to May, 1932), Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1931.

THE SURGICAL CLINICS OF NORTH AMERICA. (Issued serially one number every other month.) Volume 12, No. 1. (Chicago Number—February, 1932.) 240 pages with 92 illustrations. Per Clinic year (February, 1932, to December, 1932), Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1932.

MEDICAL CLINICS OF NORTH AMERICA: (Issued serially, one number every other month.) Volume 15, No. 5. (New York Number—March, 1932.) Octavo of 330 pages with 61 illustrations. Per Clinic year (July, 1931, to May, 1932), Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1932.

SURGICAL CLINICS OF NORTH AMERICA. (Issued serially one number every other month.) Volume 12, No. 2. (New York Number—April, 1932.) 306 pages with 84 illustrations. Per Clinic year (February, 1932, to December, 1932), Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1932.

THE MEDICAL CLINICS OF NORTH AMERICA. (Issued serially, one number every other month.) Volume 15, No. 6. (Mayo Clinic Number—May, 1932.) INDEX NUMBER. Octavo of 239 pages with 31 illustrations. Per Clinic year (July, 1931, to May, 1932), Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1932.

MANUAL OF CLINICAL AND LABORATORY TECHNIC. By Hiram B. Weiss, A.B., M.D., F.A.C.P., Associate Professor of Medicine, College of Medicine, University of Cincinnati, Cincinnati, Ohio; and Raphael Isaacs, A.M., M.D., F.A.C.P., Associate Professor of Medicine, Assistant Director of the Thomas Henry Simpson Memorial Institute for Medical Research, University of Michigan, Ann Arbor, Mich. Fourth Edition, Reset. 117 pages, with Diet Table. Philadelphia and London: W. B. Saunders Company, 1932. Cloth, \$1.50 net.

This manual gives a concise outline for a systematic physical and laboratory study of the patient and as such suggests rather than describes procedures. The outline of laboratory examinations is very complete and is accompanied by numerous tables of average normals and a section on the technic of collecting specimens.

THE COLLECTED PAPERS OF THE MAYO CLINIC AND THE MAYO FOUNDATION FOR 1931. Volume XXIII. Edited by Mrs. Maud H. Mellich-Wilson and Richard M. Hewitt, B.A., M.A., M.D. Octavo Volume of 1231 pages with 265 illustrations. Philadelphia and London: W. B. Saunders Company, 1932. Cloth, \$13.00 net.

This annual volume by the members of the Mayo Clinic always contains a collection of papers of value to everyone actively engaged in the practice of medicine and surgery. We have had the privilege of reviewing a number of these during the past five years and can assure the reader that the 1931 number is equal to any of the preceding volumes. The output for 1931 consists of 577 papers, of which ninety-nine are printed in full, thirty-six

abridged and forty-three are abstracted, and 399 by title only. The classification of other years has been followed. The greatest amount of space is given to papers dealing with some aspect of the alimentary tract. A number of papers on general subjects pertaining to medicine and the medical profession are included under the heading "Miscellaneous"; among them are The Status of Radiology, The Obligations of the Medical Profession, Tomorrow's Education and The Influence of Pain and Mortality in Modern Medical Practice. The physician will find many hours of interesting and profitable reading matter.

SIMPLIFIED DIABETIC MANAGEMENT. By J. T. Rearwood, Jr., M.D., Chief of the Diabetic Clinic and Associate Visiting Physician, Presbyterian Hospital, Philadelphia; and Herbert J. Kelly, M.D., Associate in the Diabetic Clinic, Presbyterian Hospital, Philadelphia. J. B. Lippincott Company, Philadelphia, Pa.

The dietetic treatment of diabetic patients will always be of first importance. The methods described in this little book have been tried out in both clinic and private practice. The material has been treated under three heads, namely, the essentials with which every diabetic subject should be thoroughly familiar in order to cooperate with his physician; the second chapter deals with subjects that are for the interest and benefit of the well trained diabetic, which will also be found informative to the physician; the third part takes up the subject of foods and their values with recipes and suggested menus.

A MANUAL OF PHARMACOLOGY. By Torald Sollmann, M.D., Professor of Pharmacology and Materia Medica in the School of Medicine of Western Reserve University, Cleveland, Ohio. Fourth Edition, Thoroughly Revised. Octavo of 1237 pages. Philadelphia and London: W. B. Saunders Company, 1932. Cloth, \$7.50 net.

The object of this work as expressed by the author is to furnish medical students and interested practitioners of medicine an idea of the current conception of drug action from the viewpoint of its practical importance to medicine. In this Fourth Edition the author has confined his efforts to those divisions of pharmacology in which there has been definite advance. This includes the Barbiturates, Bismuth, Cinchophen Toxicosis, Iodine Compounds in roentgenography, liver extract, Mercury Morphine addiction, sexual hormones, temperature regulation, Thallium, vitamins. The work is very complete, embracing the entire subject and its application to therapeutics and to toxicology. The author has included an extensive bibliography which indicates avenues for further study.

NEW AND NON-OFFICIAL REMEDIES, 1932, containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on Jan. 1, 1932. Cloth. Price, postpaid, \$1.50. Pp. 492. Ivi. Chicago: American Medical Association.

The recognition of a preparation for inclusion in this book singles it out from the host of new products of the pharmaceutical manufacturers as being a worthwhile addition to the existing armamentarium of the practicing physician. To be thus distinguished it must be shown, under the impartial scrutiny of the carefully chosen group which is the Council on Pharmacy and Chemistry, that it has acceptable evidence of therapeutic usefulness and that it is marketed in accordance with the honesty and straightforwardness envisaged by the excellent Rules which have been the outgrowth of the Council's quarter century experience in appraising the merits of new drugs.

In accordance with its custom of keeping the an-

nual editions of New and Non-official Remedies in the forefront of current medical thought, the Council offers in this volume the newly revised articles: Barbitol and Barbitol Compounds; Fibrin Ferments and Thromboplastic Substances; Liver and Stomach Preparations; Mercury and Mercury Compounds; and Ovary. Perhaps the most noteworthy new preparations admitted are: nupercaine-Ciba, a local anesthetic; pentobarbital sodium, a barbituric acid derivative; and iopax, a new preparation for roentgenologic use. All of the ovary preparations formerly described are omitted and none of the new standardized preparations are described, although the names Theelin and Thelol are recognized in the revised general article. Another change of importance is the classification of articles formerly listed as "Exempted" under the heading "Accepted but Not Described." There is the usual excellent index and the augmented Index to Proprieties Not Included in N. N. R.

PHYSIOLOGY OF BACTERIA. By Otto Rahn, Professor of Bacteriology, Cornell University, 438 pp., 42 illus. P. Blakiston's Son & Co., Philadelphia, 1932. \$6.00.

In this work on physiology, the bacteria are considered not as causative agents in disease but as subjects from which broad biological principles may be derived. The functional relationships of these forms are discerned in three ways, through analyses of the products of bacterial metabolism, by studies of growth of cultures under various conditions and by investigations on bacterial death. These topics form the subject matter of the book. Summaries of fact and theory following the various topics and the author's general clarity in dealing with more or less technical subjects make the book of value to others than the technical bacteriologist.

RECENT ADVANCES IN PATHOLOGY. By Geoffrey Hadfield, M.D., F.R.C.P. London, Professor of Pathology in the University of London, and Lawrence P. Garrod, M.A., M.B., M.R.C.P., London, Bacteriologist and Lecturer in Bacteriology, Late Demonstrator of Pathology, St. Bartholomew's Hospital; 67 illustrations. Price, \$3.50; Philadelphia, P. Blakiston's Son and Company, Inc.

This book of nearly four hundred pages, as the title indicates, is concerned with the latest advances in knowledge of specific diseases rather than the more abstract problems that underlie them. The authors in their selection of subjects have been guided by the importance from a clinical point of view, so that we have considerable space devoted to the pathology of respiration diseases, to Bright's disease, to the cardiovascular system, to diseases of the central nervous system and to the ductless glands. This series of "Recent Advances" (other numbers we have had occasion to review) form valuable supplementary literature to the older and more complete works on the subjects treated.

MATERIA MEDICA, PHARMACOLOGY AND THERAPEUTICS. By Walter A. Bastedo, Ph.G., M.D., Sc.D., F.A.C.P., Assistant Clinical Professor of Medicine, Columbia University; Consulting Physician, St. Luke's Hospital, New York, St. Vincent's Hospital, Staten Island, and the Staten Island Hospital; President, United States Pharmacological Convention, 1930-40. Third Edition, Reset, 739 pages with illustrations. Philadelphia and London: W. B. Saunders Company, 1932. Cloth, \$6.50 net.

Extensive recent research in physics, chemistry, physiology, pharmacology, bacteriology, experimental therapeutics and clinical medicine and surgery have made necessary and almost complete re-writing. New articles have been added on suprarenal cortex, ephedrine, quinine, plasmochin, yaten, ethylene, the barbiturates, pre-anesthetic narcotics, car-

bon dioxide, carbon tetrachloride, the antiseptic dyes. Mercurochrome, metaphen, the mercury diuretics, phenylhydrazine, insulin, ovarian preparations, colloidal lead in cancer, etc. Such are the changes incorporated into this third edition. The subject matter is well arranged and the revisions of the work should make it of greater value to the medical practitioner.

PROPER PLACE OF PHYSICAL THERAPY IN TREATMENT OF FRACTURES

Clay Ray Murray, New York, is convinced that physical therapy, properly used, can be of great value in minimizing residual disability and deformity and in cutting down the period of treatment necessary to secure an end-result; he is equally convinced that, as generally practiced the country wide today in fractures, it frequently accomplishes neither of these objects but results in increased residual disability and prolongs the time needed to secure the end-result. The fault lies in a generalized failure to realize (1) what treatment of fracture is intended to do, (2) what physical therapy can and cannot do and (3) what part the patient plays in the treatment. The fault is shared equally by the physicians and the physical therapists to whom they send the patients. The result is commonly the neglect of physical therapy during that stage of treatment when it is most valuable, and the attempt in the later stages to substitute physical therapy for the patient's part in the treatment. Physical therapy as a method of treatment in fractures can be put on a sound logical basis. One might ignore for the moment the various means of carrying out the treatment and consider what it should do to be of value. How does it fit into the modern conception of treatment of fracture? The ideal treatment of a fracture would embody the immediate anatomic replacement of bone fragments without mental or physical trauma to the patient and the immediate abolition of all pathologic changes in the bone and soft parts without the slightest interference with the usual function of the part or the usual life of the patient. The problem in each fracture is to approach this unattainable ideal as closely as one can. This is accomplished in general by early reductions under anesthesia, by the employment of a minimum of immobilization for as short a time as possible and by allowing and encouraging the active use of the part within pain limits as soon and as often as possible. The value of these principles of treatment is being more widely appreciated constantly. What is not so widely appreciated is the fact that in the part as a whole there exists an extensive pathologic process: torn and thrombosed vascular and lymphatic channels, lacerated tissues infiltrated by hemorrhage, inflammatory exudate with its cellular constituents, and the transudate of edema from circulatory and lymphatic obstruction. More than that, the organization of such infiltration into tissue is rapid. It is measured in hours and days—not in weeks and months. It can be dispersed while it is exudate, hemorrhage and cellular infiltration, and this is the time to attempt to get rid of it, not after it has become organized and can no longer be dispersed. How is it to be removed from the part? There is only one mechanism—circulatory. The problem is to restore the circulatory status of the part to normal as soon after the injury as possible. How is this to be accomplished? 1. The bone lesion should be treated by early reduction under anesthesia, with a minimum of trauma, and by as inextensive an immobilization as possible in apparatus that will allow of the maximum early active use of the part within pain limits. The following of these principles is responsible for the increasing frequency of the use of traction sus-

pension and operative fixation followed by active mobilization. 2. Appropriate physical therapy should be used from the beginning of treatment. This is the much neglected opportunity for optimal benefit from physical therapy.—*Journal A. M. A.*

RADIUM POISONING

JAMES P. LEAKE, Washington, D. C., states that subsequent to the investigations of luminous dial painting, which had been sponsored by manufacturers and others, the Surgeon General of the United States Public Health Service held a conference on the subject, December 20, 1928, as a result of which an investigation was undertaken to determine the remaining hazards, if any existed, and means for prevention. On the basis of the results of this investigation it appears that it should be possible for the industry to be conducted with entire safety. Of the possible sources of ingress of radioactive material (ingestion, skin absorption, and inhalation), massive ingestion by pointing the brush in the mouth has apparently been stopped. There is no evidence of skin absorption or of harmful alpha, beta or gamma radioactivity from sources outside the body. The inhalation of radioactive material as dust or as gaseous emanation is more difficult to control and deserves especial emphasis. The amounts of radium found in the workers are small, relative to those which have previously been noted in serious or fatal cases of radium poisoning, but the fact that this is true in the few workers examined does not give assurance of safety if a large number were employed or if the present exposure continues over a longer period. Even more than in other dust hazards, such as those of silica and lead, in which the effects are slow in appearing, the inhalation of radium dust should be kept below the point of equilibrium between intake and elimination, because great harm may be done before the condition becomes clinically noticeable or detectable by methods which at present can be easily applied. Though there is evidence, in this investigation, of accumulation of radioactive material even under the improved conditions which have obtained since 1926, there is no indication that the accumulation since that date has in any individual case been sufficient to injure the worker. The evidence does, however, show the necessity for a still further and more marked reduction of the exposure, not only barely to prevent further accumulation but also to provide a sufficient factor of safety, under varying conditions and varying susceptibilities.—*Journal A. M. A.*

ACCESSORY SINUS INFECTION IN SUSPECTED PULMONARY TUBERCULOSIS

John D. Osmond, Cleveland, gives the case histories of five patients in whom chronic sinusitis was followed by the appearance of pathologic changes in the lungs. In such cases the clinical symptoms may closely simulate active pulmonary tuberculosis. Râles and elevation of temperature are present. A careful history should prompt a roentgen examination of the sinuses in at least 9 per cent of chest cases examined. Fluoroscopic examination of the chest has very limited differential diagnostic value in determining early tuberculosis and no value in distinguishing early tuberculosis from chronic infection. When a known sinusitis exists, a stereoscopic chest study is indicated to determine the degree of pulmonary changes due to chronic infection. These roentgenograms have immense comparative value for later examinations.—*Journal A. M. A.*

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CONTENTS

Some Common Otological Problems. Carl F. Snapp, M.D.....	561	Michigan State Medical Society, September 13, 14, 15 and 16, 1932.....	585
Indications for Cesarean Section. R. S. Siddall, M.D.....	564	Editorial:	
Visceral Syphilis. Paul A. O'Leary, M.D.....	567	112th Annual Meeting.....	605
Secondary Anemia. Charles H. Watkins, M.D.....	570	Our Civic Duty.....	606
Pernicious Anemia. George A. Sherman, M.D., F.A.C.P.	574	Living Dangerously	606
The Birth Control Movement. George Kamperman, M.D., F.A.C.S.....	577	The Writing of Medical Papers.....	607
Chronic Polypoid Maxillary and Ethmoid Sinusitis with Asthma. M. P. Miller, M.D.....	582	Alcohol as a Disinfectant.....	608
Michigan's Department of Health. C. C. Slemmons, M.D., Dr.P.H.....	583	Itemized Statements	608
Official Program—112th Annual Meeting Michigan State Medical Society, September 13, 14, 15 and 16, 1932.....		Obituary	609
		Contraception	610
		One Hundred Years of Medical Practice in Oakland County Village.....	511
		General News and Announcements.....	612
		Society Activity	614
		The Doctors' Library.....	616

SOME COMMON OTOLOGICAL PROBLEMS*

CARL F. SNAPP, M.D.†

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The practicing otologist encounters many problems, great and small, which present much difficulty of solution. To the physician many of these conditions may seem exceedingly trivial and of little or no importance, but to the patient himself they may be most annoying, causing great discomfort and embarrassment, and even destroying his happiness and social contact with his fellow men. It behooves us as otologists to realize the significance of these everyday problems and to do our utmost to solve them as they arise. Too frequently we pass them off by telling the patient there is nothing serious present, that there is but little that can be done about it, and that his trouble will probably clear up shortly of its own accord.

*Chairman's Address, Eye, Ear, Nose and Throat Section, Annual Meeting of the Michigan State Medical Society, Pontiac, Michigan, September 23-24, 1931.

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Or, on the other hand, we may continue to treat a patient indefinitely for some condition which, if only studied more thoroughly and carefully, would reveal the folly of such treatment and permit us to truthfully tell the unfortunate one that no treatment is of any avail and that his ears had best be left entirely alone. This last mentioned factor exists far too commonly in our specialty and

could readily be overcome if only more thought and care were given to making an accurate diagnosis in every case. The question of an accurate diagnosis is the all-important factor in the honest practice of otology.

Given a correct diagnosis, the proper treatment to be administered in any individual case depends to a great extent upon the type of training and the experience of the physician in charge. No one method of handling a case exists in any line of medical practice. But if each patient is carefully studied as to the history, the general physical findings, the localized pathology present, the functional hearing tests, the temperament of the individual patient, and various other factors, we might readily see where certain procedures would prove valuable in some instances, and, on the other hand, the usual methods used in such conditions would be useless in the particular case under observation.

Let us consider a few specific otological problems encountered in our everyday practice. First, as regards the external ear, may be mentioned itching of the canals, caused by eczema or seborrheic dermatitis. This condition is extremely annoying to the patient and frequently is very resistant to treatment. Patients thus affected often dig and scratch their external auditory canals with matches, hair pins, and various other instruments, frequently causing injury to the canal wall, which may result in severe infection, such as furuncles or erysipelas. Furuncles in the canal is another problem which often baffles the otologist. These may be multiple and are frequently bilateral, causing, in some instances, complete occlusion of the lumen, and associated with intense pain. The majority of these inflammations never localize, or present indications for incision, consequently but little relief can be offered these suffering individuals. Various methods may be employed to relieve the pain or hasten the resolution of the lesion, but the condition must, to some extent, run its course. The question as to why a patient should have multiple furuncles in one or both ear canals, and even be subject to recurrent attacks, and never have a single similar lesion elsewhere on the body still remains an unsolved problem and one worthy of our attention.

When it comes to the middle ear there is probably nothing so trying or difficult to

overcome as chronic catarrhal deafness. The slow gradual onset, with definite pathological changes often well advanced even before the patient is conscious of any pending trouble, frequently makes the condition one that is impossible to overcome. These cases should receive the most careful observation and study, for the affliction is amenable to treatment, at least to a certain degree, and these patients with their sensation of fullness in the ears, frequent tinnitus, and progressing deafness, are surely entitled to the best that we have in us.

Careful attention to any associated pathology in the nose and throat, together with thorough and persistent study of the eustachian tube and tympanum is of the greatest importance. These cases try our patience to the utmost and honest, conscientious care must be instituted if we are to expect results. Simple inflations, with massage of the membrana tympani and the careless passing of bougies through the eustachian tube over long periods simply represents a lazy, indifferent attitude toward the welfare of our patients.

The problems presented by chronic suppurative otitis media are too well known to require enumeration in this paper. The all-important point in this instance is to have a definite clean-cut understanding in our own minds as to the indications for a radical mastoid operation. If we can differentiate between those patients requiring radical surgery and those in need of conservative treatment, we will rarely be confronted with any serious difficulty in handling these cases. Many of us are at fault in keeping up prolonged office treatment in those patients who are definitely in need of the radical mastoid operation, while, on the other hand, many needless operations have been performed where sane conservative treatment has been plainly indicated. One of the annoying problems met with in radical mastoid surgery is the inability to get a dry ear in all cases, due to incomplete closure of the eustachian tube. While this is not of serious import, yet it is most distressing to the patient as well as to the surgeon.

An extremely difficult situation to overcome is that of chronic otitis media with a long standing mucus discharge. This may be slight in amount but is more or less constant, always aggravated by an acute infection in the nose and throat and is usually associated with some loss in hearing. The

perforation is always central in type and may be quite large, involving one-half to two-thirds of the membrana tympani. The usual methods of treatment may cause a cessation of the drainage for a time only to have it suddenly recur. These patients are always much concerned about the outcome of the situation and, especially if they are a child or young person, there is great fear and anxiety about the possibility of going through life with a discharging ear. No definite relief can be offered them by surgery of the mastoid, so it becomes our duty to exhaust every possible means at our disposal to clear up the condition.

Probably the most baffling condition with which the otologist has to deal is that of otosclerosis. These poor unfortunate people have usually been here, there and everywhere in quest of relief, and have often had many mutilating operations performed on the nose and throat. Our duty is to make an accurate diagnosis, for if the condition is one of otosclerosis no further local treatment is indicated. The patient should be warned against having long series of inflations or other treatment and be advised to leave the ears absolutely alone, unless, however, there is present some associated pathology which may be amenable to treatment. It is difficult to tell these people that there is no hope for improvement, but if tact is used and we study carefully the psychology of the patient, we can usually gain their confidence and they will greatly appreciate our honesty and frankness. Visits later on to quacks and various healers can be avoided to a great extent if we gain the confidence of the patient and ask him to return to us at stated intervals for a complete checkup on his hearing. Much credit is due the American Otological Society for its sincere efforts in attempting to add to our knowledge of this condition, and we earnestly hope that much benefit will come to mankind from their researches.

As regards the internal ear the otologist is often confronted with the problem of nerve irritation or degeneration. A careful study of each case must be made in order to locate, if possible, the source of the infection. The Kahn test should be made on all such cases as a routine procedure and the entire body combed carefully for all possible foci. Not one, but all of these that are found should be eradicated. A careful history as to any acute infectious diseases is

very important. But the otologist's real problem is in those cases of eighth nerve degeneration of undetermined origin. If the condition is of long standing and is not progressive we need not worry even though we do not locate the cause as the damage has long since been done with no possible chance of repair. But if there is an active neuritis present, together with the associated deafness and tinnitus, we are at a complete loss as to treatment if the etiology is not found. These patients will always find someone who will gladly give them prolonged treatment through the eustachian tube and who, for lack of correct diagnosis, either from ignorance or carelessness, will tell the patient they have a very severe catarrhal condition.

Tinnitus aurium, from whatever cause it may come, is one of the most difficult and stubborn conditions to clear up that we experience in our specialty. These patients are greatly annoyed and worried about the symptom, often becoming extremely nervous over the situation, which, in turn, greatly aggravates the tinnitus. In some instances it is absolutely impossible to eradicate the trouble, especially when associated with the heredity type of deafness, severe anemias, or with arteriosclerosis of the labyrinthine vessels. Continuous irritation of the eighth nerve by a focus of infection, especially dental infections, must be constantly kept in mind as an etiological factor. Dental infections seem to have a definite affinity for the eighth nerve and are often the cause of severe tinnitus. In all cases of tinnitus aurium we should exhaust every possible means to eliminate all foci, carefully study the eustachian tube and tympanum, the ossicles, membrana tympani, and even the external auditory canal, as well as the entire body. Weeks and months may elapse before results may be obtained, while in some cases no improvement whatever is noted and we are compelled to simply alleviate the intensity of the symptoms by administering certain medications.

Many other problems might be mentioned but no effort is made to include here every otological condition, but simply to enumerate a few of those which are commonly met with from day to day in our routine office practice. Neither is any attempt made to offer a solution to these problems as in that event each one would constitute subject matter for an individual paper. It can readily be seen, however, that the otologist is con-

fronted with many perplexities, all of which require the most careful thought and study that it is possible for us to give them, and that no matter how insignificant or trivial a complaint may seem to the physician, it is

frequently very annoying and of great importance to the patient. Let us strive to solve these problems and give to our patients and to our specialty the best we have in us.

INDICATIONS FOR CESAREAN SECTION*

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During the fifty years since Säger advocated suturing the uterine muscle, and especially with the improvements in surgical technic of recent years, abdominal cesarean section has become one of the most useful but at the same time possibly the most abused of obstetrical operations. In spite of frequent discussions of the subject, it is stated repeatedly that this abuse is probably due to lack of knowledge or thoughtful consideration of the facts in regard to this type of delivery. Therefore, it may not be amiss to emphasize more or less established points about the operation and at the same time present certain opinions based on the study of the literature and on personal experience in clinic and private practice.

In the first place, although cesarean section may be done at one's convenience, is not technically difficult as compared to other obstetrical procedures, and should give the best fetal results, it is obstetrically speaking a dangerous method of delivery for the mother. Even when done under ideal conditions in the best hospitals the comparatively low surgical mortality of one or two per cent is three to ten times the maternal risk of vaginal delivery. Nor should remote dangers be ignored, for rupture of the uterus with its frequently disastrous consequences occurs in about four per cent of pregnancies subsequent to cesarean section. In the face of such facts, serious consideration should be given to the probable effect of an existing abnormality on the outcome of delivery by vagina before resorting to abdominal section.

Even more grave are the consequences of cesarean section done under unfavorable circumstances; more especially, long after the onset of labor or rupture of the membranes. Holland's figures are a good illustration:

Operation	Maternal mortality %
Before onset of labor.....	1.6
Early in labor.....	1.8
Late in labor.....	10.4
After induction of labor.....	14.0
After attempts at forceps, etc.....	27.0

Before labor or soon after its onset we have to consider chiefly the actual operative mortality, but late in labor the danger of infection practically makes the conservative operation contraindicated. Certainly, we are not justified in subjecting a mother to grave risk for the sake of a child perhaps already injured and subject to the uncertainties of infancy and childhood.

In this connection, mention should be made of types of operation other than the conservative or classical. Cesarean section followed by hysterectomy, even in the presence of frank infection, is not appreciably more dangerous than classical section before the onset of labor. But, naturally its employment must be restricted to instances where the uterus is diseased or in which future childbearing might be sacrificed for those already living. The low cervical technic as developed by Krönig and modified by Beck and DeLee affords a considerable barrier to the spread of infection from the uterus to the peritoneal cavity. This is an advantage worthy of consideration under any conditions when cesarean section is to be done. Several years ago we demonstrated

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occasional infection of the uterine contents under the most unexpected circumstances, and peritonitis following classical cesarean section with supposedly ideal conditions is far from unknown. Its advantage over the classical operation is most striking when done late in labor, and it has been advanced as a safe method of delivery at that time, with the advantage of preservation of the childbearing function. However, its proponents' enthusiasm is not in keeping with their statistics, as these show only a lessened degree of the same old dangers—immediate surgical mortality, infection, and rupture in subsequent pregnancies. Though recognizing and welcoming the superiorities of this technic, I am not convinced that its results justify any great extension of the accepted indications for cesarean section. In this connection, I should like to state that one disadvantage, that is, the frequently mentioned technical difficulty, has not impressed some of us.

A consideration of the indications for cesarean section shows contracted pelvis to be of first importance. At Harper Hospital this indication is given for one-third of all sections. However, it should be stated that markedly contracted pelvises occur rather infrequently in the private patient group—probably in not more than one-half of one per cent. For the three years preceding 1931 we have in our office the measurements of 340 individual obstetrical patients, each patient being considered as one regardless of more than one delivery. There were six with pelvic inlet contractions and the same number with outlet contractions. In only one case was cesarean section necessary because of contracted pelvis. In the case of inlet contractions we are convinced that external pelvimetry gives very little information, that internal measurement is of some value, but that the degree of disproportion between the presenting part and the pelvis should be the criterion in deciding on section. The so-called test of labor is of little use, since there can be no real test without several hours of good pains with the cervix fully dilated and the membranes ruptured—a very dangerous time to deliver by cesarean in case the head fails to descend. In outlet contractions, the posterior sagittal is equally as important as the transverse of the outlet.

In Detroit the next most important indication is pregnancy subsequent to a cesarean

section done for other reason than contracted pelvis. It is true that the properly sutured uterus usually heals by regeneration of muscle fibers, yet we can never be sure that a defect does not exist, especially if the puerperium was febrile and we are not acquainted with the ability of the operator. I have seen a number of women delivered safely by vagina following cesarean section, but on the other hand have seen one ruptured scar and several others that almost certainly would have ruptured in labor. Is it not reasonable, at least where the section was done on a primipara before labor, to substitute the one or two per cent risk of cesarean section for the four per cent chance of ruptured uterus with its high maternal and almost one hundred per cent fetal mortality?

Pelvic tumors preventing engagement of the head make section necessary occasionally. Ovarian cysts are better removed early in pregnancy if possible. Fibroids of the uterus blocking the birth canal may be pulled up out of the pelvis by contractions of the uterus. However, if the tumors themselves offer an indication for laparotomy, cesarean section followed by hysterectomy accomplishes two things and is no more dangerous than hysterectomy later.

There are certain other conditions for which cesarean section is done, sometimes with scant reason. Patients with uncompensated cardiac disease may justifiably be relieved of the physical exertion of labor by abdominal delivery, which should be followed by sterilization. Severe premature separation of the normally implanted placenta may sometimes make section advisable, especially if the child is alive and viable or if the mother's condition is becoming rapidly worse. However, the good results in a series treated expectantly in Dublin should call for careful consideration of each case before operating. Because of the comparatively high fetal mortality in elderly primiparas, there is a growing feeling that a woman in her first pregnancy and nearing the age of menopause should be informed of the risks and be permitted delivery by cesarean section if she so elects. The operation has been, and apparently still is, frequently employed in one condition for which we now know it to be distinctly contraindicated, namely, true eclampsia. For this disease, cesarean section gives worse results than any other treatment except forcible

dilatation of the cervix. On the other hand, in rapidly developing toxemia with eclampsia imminent, this method of delivery gives excellent results, comparatively speaking, for mother and child. It is also used at times in severe nephritic toxemia where sterilization is indicated. Transverse and other abnormal presentations rarely call for section as delivery from below is usually feasible and safer. Cesarean section for disproportion due to excessive size of the fetus, while often a confession of error in judgment, may be the best solution of the difficulty.

I have referred to the advantages of the low cervical technic when cesarean section is necessary late in labor—advantages which have led to its recommendation in cases where labor has come to a standstill due to uterine inertia or rigid cervix. However, a dispassionate study of the published statistics will convince one that there is not yet much reason to extensively replace our older methods of treatment, unsatisfactory as they undoubtedly are. In confirmation of this opinion, it is interesting to note that of the fifty-one cesarean sections done at Harper Hospital in 1930 there were only two performed on such indications.

The role cesarean section should play in the treatment of placenta previa is a much debated point with the preponderance of evidence, to my mind, against its routine use. It does undoubtedly give the best fetal results, and this may well be the deciding point in cases at or near term with the mothers in favorable condition for section. On the other hand, so often these mothers are frankly or potentially infected,—a con-

dition which gives a frightful mortality rate with any type of cesarean except Porro section. Then too, profuse bleeding in many of these patients makes imperative a prompt introduction of the balloon or a Braxton-Hicks version as being the quickest reliable methods of controlling hemorrhage. It is conceivable that the longer delay in preparation for cesarean section might mean death, and also it is to be remembered that incision of the uterus is inevitably associated with further bleeding. I am prepared to admit that cesarean section under ideal conditions should give about as good maternal results as other methods but have a great fear that recent good reports on several such series will be carelessly interpreted to mean that cesarean section is the treatment of choice for all placenta previa cases.

To conclude: Cesarean section offers a rapid and convenient method of delivery with the minimum of risk to the child but has a high maternal mortality as compared to vaginal delivery. The dangers are greatly increased by its employment under unfavorable circumstances. Furthermore, there is a remote but still definite risk should subsequent pregnancy occur. Consequently, the operation should not be regarded as a cure-all for any and every type of obstetrical difficulty, but instead should be resorted to only when its danger is less than that of the abnormal condition. Often, a decision depends on whether or not an existing danger for the child is great enough to justify jeopardizing the mother for its relief. Under these circumstances it is to be remembered that the lives of the two are not of equal social or economic value.

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EFFECTS OF SPINAL ANESTHETICS ON SPINAL CORD AND ITS MEMBRANES

Loyal Davis, Hale Haven, J. H. Givens and John Emmett, Chicago, emphasize the fact that the spinal anesthetic solutions in common use today are hemolytic as well as myelolytic and would seem to act on the myelin of the nerve fibers as they do on the lipoids of the red blood cell membrane, causing its dissolution. After the injection of the spinal anesthetics in most prevalent use today into the spinal dural sacs of dogs, they have observed the following changes: (1) a varying degree of inflammatory reaction in the leptomeninges; (2) passive changes in the ganglion cells of the gray matter of the cord similar to those seen in retrograde or so-called wallerian degeneration; (3) swelling and fragmentation of the axis cylinders; (4) signs of degenerative

changes in the fiber tracts of the cord. The fact that the last three of these changes were not pronounced in the cords of animals which were allowed to live ninety days speaks against their permanent nature. This is also suggested by the incomplete picture of degeneration in the ganglion cells and the cervical and dorsal segments. However, the inflammatory changes in the leptomeninges were so constantly present that they cannot be overlooked. The authors hope to extend their studies to the spinal cords of human beings and to incorporate their results with those clinical observations which have been made in a careful neurologic examination of patients who have been operated on under spinal anesthesia. In many instances neurologic complications have been present for as long as a year after the injection of the spinal anesthetic.—*Journal A. M. A.*

VISCERAL SYPHILIS*

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Syphilis as a cause of disease in the abdomen is not frequently encountered in general practice. In a clinic for patients with syphilis, approximately 3 per cent of the patients will be found to have syphilitic disease in the upper part of the abdomen, and of the great majority of these the liver or stomach will be the organ involved. Syphilis of the pancreas and bowel is a rarity. In this paper I shall consider syphilis of the stomach and liver, because even though they are not common diseases, both offer exceptionally interesting diagnostic and therapeutic problems, and the fact that they frequently afflict the same patient materially adds to the problem of treatment. The diagnosis of gastric or hepatic syphilis frequently has been made at the time of an abdominal exploratory operation, and this no doubt will continue to be the most common means of conclusive diagnosis in the future. This is not said in condemnation of present day diagnostic ability, because such exploratory abdominal procedures often have been justified by demonstration of disease in the liver which could not previously have been suspected, and since the treatment of hepatic syphilis is a problem which entails specialization in the use of the arsphenamines, early recognition of the hepatic disease is of great significance in planning subsequent treatment.

SYPHILIS OF THE STOMACH

Gastric syphilis has been a controversial disease for some time. The debate has centered around the point whether diagnosis is possible unless the *Spirocheta pallida* has been demonstrated in excised tissue from the stomach. The less critical group of disputants believes that a diagnosis of gastric syphilis is justifiable when a demonstrable gastric lesion disappears under antisypilitic treatment, and when this effect is accompanied by constitutional improvement and the relief of gastric symptoms. It is necessary to emphasize the fact that the term gastric syphilis is applied only to those cases in which demonstrable syphilitic organic disease of the stomach is present; gastric crises and reflex gastric disturbances of patients who have syphilis are not included in the term, nor is the large group of disturbances

of patients, who have syphilis, and, in addition, a simple gastric ulcer or gastric malignant growth. No doubt one of the prominent reasons for the state of confusion that exists in regard to gastric syphilis is due to the fact that malignant or simple gastric ulcers of patients who have syphilis are often misinterpreted as syphilitic lesions. Seven different types of gastric syphilis have been reported: multiple ulcers, single ulcers, single nodules, diffuse gummatous infiltration, nodular ulcerative lesions, chronic interstitial fibrosis, and linitis plastica.

The history in many cases with which I have been concerned was the typical one of gradual but steady decrease in the capacity of the stomach, in spite of the fact that good appetite was maintained. Vomiting usually gave immediate relief, and intervals of relief lasting three to six months were not uncommon. The average age of the patients was thirty-five years, and the duration of the gastric complaint, two years. There was achylia in more than three-fourths of the cases; gastric retention and hemorrhage were not common. Perforation was not encountered in any of the cases.

The suggestion that a gastric lesion may be of syphilitic origin is most frequently made by the roentgenologist. He may make the diagnosis unequivocally, or he may raise the question of possible syphilitic etiology and recommend further examination by the syphilologist. Roentgenologic detection of a gastric filling defect, with firm, rigid borders, absence of peristalsis in the involved region, and a gaping pylorus, taken by themselves are not sufficient evidence on which to base a diagnosis. However, Moore and Aurelius have expressed the belief that a long, central, hourglass deformity, or a diffuse deformity which converts the stomach

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into a narrow tube without shortening it are virtually pathognomonic. The deformity in the majority of cases adjoins the pylorus, is less often of the hourglass type, and is not commonly found to involve the entire stomach.

However, the roentgenologist must bear in mind the secondary features of gastric syphilis, such as disproportionate loss of weight, cachexia without accompanying anemia, persistent vomiting, and postprandial pain relieved by vomiting. The presence of a palpable mass in the epigastrium, associated with a gastric filling defect, does not necessarily warrant a diagnosis of gastric malignancy, for palpable epigastric masses are often present in cases of gastric syphilis.

Clinical signs of syphilis are only slightly more common among patients with gastric syphilis than they are among patients who have both syphilis and gastric carcinoma. In cases of the former group is found indisputable evidence of syphilis in 27 per cent, as compared with 16 per cent in patients of the latter group. Hence, the presence of clinical signs of syphilis, if a patient has a gastric lesion, does not materially help in arriving at a conclusive diagnosis. Similarly, the Wassermann test or flocculation tests are not significant in distinguishing a malignant from a syphilitic gastric lesion. In only 73 per cent of the cases of gastric syphilis I recently reported was the reaction to serologic tests positive.

There can be no controversy over the fact that recognition of the *Spirocheta pallida* in tissue excised from a gastric lesion affords the only means of making a conclusive diagnosis of gastric syphilis. However, experience has taught that it is not possible to demonstrate the *Spirocheta pallida* in every case of gastric syphilis in which tissue is excised for microscopic study, because syphilitic lesions of the stomach may undergo spontaneous involution, leaving residual scarring, just as syphilis of the skin does. In addition, the diagnosis of gastric syphilis is so obvious in certain cases, from the history, roentgenologic appearance, and concomitant clinical features, that exploratory operation and excision of gastric tissue are not warranted.

The most practical and common means of arriving at a diagnosis in this type of case is the therapeutic test. I have found that this is accomplished more readily with the

patient in the hospital and under constant observation, where the intake of food can be measured and the same diet maintained throughout the test. Frequent estimation of the degree of anemia and its variations, besides daily records of weight are made. Intensive application of the arsphenamines, in conjunction with either mercury or bismuth and the iodides, is carried on simultaneously. The response to treatment that patients with recent gummatous gastric infiltration display is little short of miraculous, and within two weeks it is possible for them to leave the hospital and to continue antisyphilitic treatment while ambulant. However, patients with the chronic, interstitial, fibrotic type of lesion respond slightly to antisyphilitic treatment, and it is in this type of case that the therapeutic test loses its value as a diagnostic procedure. Among patients who have both syphilis and gastric carcinoma, nonspecific improvement may be noted following use of the arsphenamines: slight gain in weight, and temporary improvement in gastric distress may be confusing, but since this improvement is usually of short duration, continued observation usually settles the issue. The most difficult phase of the therapeutic test is the decision as to when the medical trial should be stopped and surgical intervention recommended. This is particularly important when the gastric lesion is situated at a point at which surgical excision is possible, and there is the probability that nodal involvement has not taken place. It is my practice to confine the therapeutic test to approximately three weeks, and if there is no gain in weight or strength, no decrease in the anemia, and distress after eating persists, I feel justified in urging exploratory operation; that is, if anything is to be gained by such a procedure. Further roentgenologic studies at this time are of practically no value in helping one to reach a conclusive diagnosis, for in the majority of cases there is no significant decrease in the filling defect and what decrease there is, appears only after several months.

In the cases in which the result is interpreted as a positive therapeutic test, antisyphilitic treatment is continued in courses of six or eight injections of arsphenamine, with mercury or bismuth and iodides, and when the patient's condition permits, further examinations are undertaken to elicit other manifestations of syphilis. The results of

treatment in a group of eighty-one patients with gastric syphilis, observed for from two to nine years, showed that 37 per cent were clinically "cured," 27 per cent were decidedly improved, and of 29 per cent the condition was unchanged. The group in which the condition was unchanged consisted, in the main, of patients with contracted and fibrosed stomachs, who were greatly embarrassed by the small capacity of their stomachs. For such patients, unfortunately, neither continued antisyphilitic treatment nor plastic gastric operation offers relief. In gastric syphilis, early diagnosis and early institution of treatment are rewarded by a high incidence of cure.

SYPHILIS OF THE LIVER

Hepatic syphilis is more common than gastric syphilis, and, in addition, the hepatic complications that appear in the course of, or as a result of treatment for syphilis greatly increase the incidence of hepatic disease among these patients. Involvement of the liver in the course of the early phases of syphilis may be merely transient, or it may lead to acute yellow atrophy and death; on the other hand, hepatic disease appearing in the late stages of syphilis is insidious, slow in its progress, difficult to diagnose, and offers additional therapeutic hazards. Wile has emphasized the features of hepatic dysfunction in association with early syphilis, and Warthin demonstrated the presence of *Spirocheta pallida* in large numbers in the livers of patients who had died of syphilitic acute yellow atrophy. When hepatitis is suspected to be afflicting a patient with acute syphilis, it is advisable to limit the treatment to the use of mercury or bismuth and iodides, until sufficient time has elapsed to determine what course the case is pursuing. Subsequent treatment is dependent on the course the disease has pursued. Hepatic disease of late syphilis appears in the following forms: asymptomatic hepatitis, diffuse hepatitis, gummatous hepatitis, chronic hepatitis, and syphilitic cirrhosis with jaundice (biliary cirrhosis) or with ascites (portal cirrhosis). Asymptomatic hepatitis is important because it frequently is the basis for some of the hepatic complications that appear during treatment. The degree of involvement is too slight to produce clinical signs or symptoms, and as a result the diagnosis is usually made at the time of abdominal operation. Various degrees of dif-

fuse and gummatous hepatitis are to be found among patients with asymptomatic hepatitis, and it is to be remembered as a mild phase in a transient disease, which, however, may be made severe by injudicious treatment.

Gummatous hepatitis rarely occurs alone, but as a rule is accompanied by certain degrees of diffuse hepatitis. Gummatous hepatitis may be in the form of a large, single gumma involving the greater portion of one lobe of the liver, or it may occur as diffuse miliary nodules involving most of the parenchyma. It is unfortunate that neither diagnostic acumen nor existing laboratory aids have reached the point at which it is possible to recognize early syphilitic disease in the liver. In laboratory animals it has been demonstrated that the greater part of the liver must be functionless before significant symptoms are to be recognized. It was because of this fact that in appraising the results of treatment of a group of patients who had syphilitic disease of the liver I limited my survey to the cases in which the diagnosis was made at the time of an abdominal operation. In this group it was found that the results of treatment were less encouraging in the group of patients with diffuse hepatitis and best in those with a single gumma or a few gummas in the liver. It was also observed that in the group of patients who had diffuse hepatitis the results from treatment with arsphenamine were decidedly less favorable than among those for whom mercury and iodides only were prescribed. The intensive use of the arsphenamines in the group of patients who had diffuse hepatitis predisposed to early development of cirrhosis and short expectancy of life. On the other hand, patients with a few gummas in the liver, and but a slight amount of hepatitis, did remarkably well following the use of arsphenamines, mercury, and the iodides. There were several patients with numerous large gummas of the liver who received practically no antisyphilitic treatment, and, except for a large, nodular liver, are well twenty years after operation. These patients probably retained sufficient hepatic tissue, aided by compensation, to maintain their hepatic function. In view of the fact that it is not possible to perform exploratory laparotomy to determine the extent of the diffuse hepatitis in a case of syphilis and disease of the liver, it is recommended that the

antisyphilitic treatment be limited to the use of iodides and mercury or bismuth for approximately six months; at the end of this time observation usually will have permitted more definite conclusions in regard to the status of the liver, and frequently the addition of arsphenamine to the therapeutic program will then be permissible, if the advisability of giving it in small doses is borne in mind.

Cirrhosis of the liver is the result of injury to the liver; syphilis, infections, alcohol, and arsenic are among the causes. Hence, if a patient has syphilis and hepatic cirrhosis, antisyphilitic remedies must be given with great caution, and preferably confined to the use of mercury and iodides administered by mouth. Compensatory hypertrophy is to be encouraged, aided by suitable diuretics and the avoidance of further trauma in the form of hepatotropic drugs. In the late phases of hepatic cirrhosis, little benefit accrues to the liver by treatment for the syphilis.

The opportunity is not available here to consider the hepatic complications encountered in the treatment of syphilis, other than to say that the liver is readily injured not only by the *Spirocheta pallida*, but by arsenic and intercurrent infections as well. Accordingly, hepatic complications should be

anticipated as a late complication of treatment of syphilis.

In summary it should be emphasized that when hepatic syphilis is diagnosed or suspected, treatment should be inaugurated with mercury and iodides, and the dosage increased according to tolerance and the therapeutic response. Frequent observations afforded by the treatment often will permit of crystallization of the impressions that prevailed when treatment was started. Arsphenamine may be used to advantage in cases of the gummatous type, whereas if the patient has extensive diffuse hepatitis, early cirrhosis may develop as a result of its use. Expectancy of life is longest among those with gummatous hepatitis, and it is shortest among those with syphilitic cirrhosis. Functional tests of the liver are of no value if patients have gummatous hepatitis, but in the hepatitis of acute and late syphilis, frequent repetition of the tests over a long period offers an index of the degree of dysfunction.

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SECONDARY ANEMIA*

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It is not possible in a paper of this scope to consider all phases of secondary anemia. My purpose, however, is to point out a few essential points in the diagnosis and to give a general outline of the more significant types of secondary anemia, together with the more accepted methods of treatment.

There are numerous causes of secondary anemia, many of which are obvious, but in the obscure types, identification of the cause may be difficult. In general, obscure forms of secondary anemia may be due to chronic loss of blood, which may be persistent or recurrent and associated with malignant lesions of the gastro-intestinal tract, benign polypoid tumors of the stomach, benign ulcers of the small intestine and cecum, and polyps of the colon. In many instances, slight

bleeding from hemorrhoids has produced marked secondary anemia. Toxic conditions, including acute and chronic infections, frequently cause marked secondary anemia. Parasites, various chemical poisons, primary forms of blood dyscrasia and neoplastic diseases may also be listed as often producing severe anemia. The significance of dietary deficiency cannot be overemphasized. Occa-

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sionally, even when the diet is adequate, degenerative disturbances, or disturbances of metabolism, may prohibit proper assimilation of the more important dietary factors, may liberate substances which neutralize the dietary factors, thus prohibiting normal maturation of the erythrocytes, or degeneration of certain organs may destroy the normal hormone and enzyme secretion, resulting in improper assimilation of active substances.

Of great importance in the investigation of secondary anemia is consideration of the laboratory data. The anemia may be of any grade, from one of extremely mild degree to one of great severity. In general there is reduction in concentration of hemoglobin and in erythrocytes, although the reduction in the latter may be but slight. Practically always the percentage of hemoglobin is reduced more proportionally than the erythrocytes; this results in a low color index and also in a low iron index. The morphologic considerations of secondary anemia are likewise of importance. A great deal of evidence may be obtained as to the regenerative activity of the bone marrow, the content of hemoglobin of individual cells, and as to the presence or absence of toxicity, chronic infection, and primary forms of blood dyscrasia.

THE TWO GENERAL TYPES OF BLOOD PICTURE

In the more obscure forms of secondary anemia, two general types of blood picture will be found. I shall try to describe features of the first of them. It is characterized by rather marked decrease in the percentage of hemoglobin, with the number of erythrocytes remaining practically normal. Regeneration of erythrocytes is normal, as is evidenced by anisocytosis, or variation in the size of erythrocytes, with a tendency toward increase in size, or macrocytosis. A normal degree of regeneration in bone marrow is indicated by polychromatophilia, erythrocytes in which the basophilic spongioplasm has not been entirely replaced by hemoglobin, reticulated erythrocytes, immature erythrocytes in which the basophilic spongioplasm, not yet replaced by hemoglobin, is stained by a vital dye. The reticulated erythrocytes in general also will be found to be normal. In severe cases of this first type there generally is marked evidence of regeneration of blood; normoblasts or nucleated erythrocytes of the definitive series,

and Howell-Jolly bodies, may be present. The characteristic morphologic feature of the blood is the marked hypochromasia of the erythrocytes; the cells have a pale, washed-out appearance. There may also be slight anochromasia or piling of chromatin around peripheral portion of erythrocytes. The leukocytes for the most part do not show change in structure, unless there is an associated infectious process or other condition which may produce toxic changes in the neutrophils and monocytes. Toxic changes are evidenced in the neutrophils by blurring of the chromatin of the nucleus, a tendency toward a shift to the left, which means decrease in the number of lobes and intensification of the granules of the cytoplasm. In the monocytes the nuclear structure is hazy, and has a washed-out appearance; there is a tendency toward indentation of the nucleus and generally more or less vacuolization of the cytoplasm. There may or may not be heavy azurophilic granules in the cytoplasm. This first type of secondary anemia is found chiefly in females, and in some instances a definite cause for it cannot be found. It may be the result of menorrhagia, chronic loss of blood from other causes, chronic infection, dietary deficiency, and so forth; however, it is not necessarily confined to any one of the causes just named, but may be a combination of factors.

In the second type of secondary anemia there is an almost proportionate reduction in the concentration of hemoglobin and in the erythrocyte count, resulting in a color index closely approximating 1. The number of reticulated erythrocytes may be decreased, but in some instances a definite increase in their number is found. The leukocytes as a rule are practically normal unless there is an associated toxic factor, which may or may not be the causative agent of the anemia. Morphologically, the erythrocytes give evidence of only a slight decrease in the amount of hemoglobin, and there is, in most instances, but little evidence of regeneration. Frequently, the evidence of degeneration may be more pronounced than that of regeneration, although, in certain cases, particularly as a result of hemorrhage, the features of degeneration and regeneration are found in about equal proportion.

Although in general most cases of obscure secondary anemia will fall into either the first or second of the types described, so far as the morphologic picture is concerned, yet,

in many cases, varying degrees and combinations of the characteristics of both types are exhibited. Such cases cannot be properly classified.

THE NEED OF EXTENDED SEARCH FOR THE CAUSE

Treatment for secondary anemia should not be instituted without complete study of the patient. The general tendency is to treat anemia with only a superficial search for the underlying cause. Since investigation of secondary anemia frequently entails detailed examination, this is often slighted, and occasionally serious disease may pass unrecognized, particularly if the blood responds to the type of treatment given. It is not necessary that the patient be deprived of therapeutic measures until such a search has been made, for many times the anemia is so severe that treatment is essential. Nevertheless, while the treatment is being carried out, thorough examination for the initial cause and its contributing factors should be conducted. Besides complete roentgenologic examination of the gastro-intestinal tract, emphasis should be placed on examination of stools for occult blood, for frequently bleeding lesions, particularly of the small intestine, can be recognized only by this means. If the stool is positive for blood at the first examination the patient should be given a meat-free diet for several days, following which stools should be examined for at least a week. One negative stool examination is practically of no significance, for frequently bleeding will be of relatively short duration and thus observation over a number of days is essential. If blood is found persistently, abdominal exploration may be advisable, particularly if accompanied by even mild gastro-intestinal symptoms. Many cases in which there has been persistent and chronic loss of blood have proved to be examples of early malignancy or benign bleeding lesions in the gastro-intestinal tract, evidence of which could not be discovered by roentgenography.

TREATMENT

Experimental work, as well as clinical experience over a number of years, indicates the efficacy of iron in the treatment of secondary anemia. Iron is generally found to be of much more value in secondary anemia

when there is a low color index than in the type in which there is equal reduction in hemoglobin and in erythrocytes. Forms of anemia which are due to chronic loss of blood, dietary deficiency, pregnancy, chronic infections, and the so-called chronic chlorosis, or hypochromic anemia are frequently benefited by adequate doses of iron. Iron could not be expected to be of benefit in secondary anemia due to primary changes in bone marrow, in which the bone marrow is aplastic, or in a condition in which destruction of blood far outweighs regenerative activity. The exact form in which iron is prescribed is less important than the fact that it be given in sufficiently large doses and in such a general state that it can be readily assimilated. For this reason it is preferable to use a soluble iron salt. The optimal dose of iron is approximately 1 gm. of metallic iron daily. This amount will be obtained by approximately 90 grains of ferric citrate, 90 grains of ferric ammonium citrate or 35 Bland's pills daily. It is important that treatment with iron be continued for a few weeks, even after the blood has returned to normal, in order to supply adequate amounts for subsequent use in the synthesis of hemoglobin. In many instances administration of iron will have to be continued indefinitely, particularly in the hypochromic type of secondary anemia. Large doses will produce definite improvement in the blood, whereas smaller doses will give little if any effect. The diarrhea that occasionally is caused by large doses of iron may be prevented, to a large extent, if the iron is taken immediately after meals together with a glass or two of water. However, if this does not afford relief, smaller doses may be given for a time and the dose gradually increased until the maximal amount again is being given. Iron supplements the action of other substances, as has been shown by recent experimental and clinical investigation, and it is generally conceded that the combination of liver and iron is much more effective than either alone. In the past, many of the failures accredited to treatment with iron undoubtedly were due to inadequate dosage.

Whole liver, either raw or cooked, has been proved to be effective in the treatment of secondary anemia. It must be emphasized that liver contains many substances other than the principle which is active in pernicious anemia. It has been shown that

this effect is not due to the iron in the liver but that other materials are present which produce active regeneration of hemoglobin, particularly in anemia due to chronic loss of blood. However, as a rule, whole liver is not as effective as iron salts and certainly is much more difficult to take. It is essential to take the liver over a relatively long period, for it is necessary to provide the substances of which hemoglobin is built before hemoglobin can be synthesized.

Clinical observation on the use of liver extract which contains the principle that is active in the treatment of pernicious anemia has given little evidence of response in secondary anemia. In some instances, good results have been reported from the use of a combination of liver extract and large doses of iron, but in view of the expense of this preparation and the fact that iron salts or even whole liver is much more potent, its use is not recommended.

In the Section on Clinical Hematology of The Mayo Clinic, we have used a preparation of desiccated liver of fetal calves in the treatment of obscure cases of secondary anemia, and have obtained excellent response in anemia, of the hypochromatic type, some cases of which previously had failed to respond to large doses of iron or whole liver. This preparation apparently provides, as does whole liver, substances from which hemoglobin can be built and which can be readily assimilated by the body. Here again it is essential that treatment is carried on for one or two months even after the blood has become normal, and in some instances it has been necessary to continue to use the preparation almost indefinitely.

Arsenic has been used for many years in the treatment of primary and secondary anemia. Judging from recent experimental evidence, it seems that arsenic depresses the production of erythrocytes, and that it is only after cessation of administration of arsenic that there is increased activity of the bone marrow. At present, therefore, there seems to be no adequate justification for its use in secondary anemia.

Copper has been shown to produce increased regeneration of blood of anemic rats, and copper in conjunction with iron has been shown to be effective in anemia of infants. Copper and manganese have been suggested as supplements to iron in the syn-

thesis of hemoglobin in cases of secondary anemia. Clinical investigation thus far has not demonstrated either the efficiency or inefficiency of independent administration of copper and manganese.

Transfusion should be regarded as an emergency measure, or as a preliminary adjunct to the treatment of secondary anemia. In severe cases of chronic anemia, regardless of type, when the number of erythrocytes and the concentration of hemoglobin are low, and morphologic studies reveal inactive regeneration, transfusion undoubtedly is indicated; also, patients who have severe anemia associated with low blood volume will be rapidly benefited by this means. Frequently transfusions have a tendency to slow the response of the blood to other methods of treatment and their use should be restricted to cases of very severe anemia.

The part played by achlorhydria as a causative factor in secondary anemia of hypochromic type has received much consideration in recent literature. It is described as afflicting chiefly women between the ages of thirty and fifty years, and as generally being insidious in onset. Authors do not agree on response to treatment; some find definite improvement from the use of preparations of iron and liver, whereas others report no improvement. In our experience, at the clinic, the same clinical type of anemia which these women have, together with all the same laboratory findings, has been found in the presence of normal or high concentration of gastric acids, and the response to treatment of patients who have achlorhydria has been practically identical to that of patients who do not have achlorhydria. At the present time, further investigation of anemia in the presence of achlorhydria is necessary, and undoubtedly other factors, such as menorrhagia, dietary deficiency, and metabolic disturbances may be shown to play a very important rôle.

Dietary deficiency must receive much consideration as a causative factor in chronic obscure secondary anemia. Careful investigation of the type of food eaten by the patient often will lead to the discovery of a marked inadequacy of certain factors. In a casual history many patients will insist that they eat ample meat, green vegetables, fruits, and that their intake of vitamin is adequate, whereas a detailed history will reveal unbalanced meals and inadequate ali-

mentary essentials. As has been suggested before, dietary deficiency may exist in spite of an adequate and well balanced diet if the bodily processes are unable properly to assimilate the food. On the basis of experimental work, a diet for secondary anemia should contain ample vitamins, vegetables, red muscle meat, liver, kidney and fruits; among the fruits, particularly apricots, peaches, prunes, and the juice of citrus fruits. Experimental work seems to indicate that the green vegetables are of more value for their mineral content than for their chlorophyll nucleus. Such diets, supplemented with large doses of iron, are logical in the treatment of most types of secondary anemia.

SUMMARY

It is essential that a thorough search be made for the causative factor, in a case of secondary anemia, and elimination of this may require extended investigation. Morphologic study of the blood is of value, in that it frequently gives information in regard to the primary cause and in addition supplies information in regard to the condition of the blood-forming organs themselves. An adequate and well balanced diet, large doses of iron together with whole liver, seems to be the best single treatment for most cases. It should be emphasized that each case of secondary anemia requires individual attention and no one type of treatment should be used as a routine.

PERNICIOUS ANEMIA

REPORT OF AN UNUSUAL CASE

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The characteristic features of pernicious anemia are well known and to the man familiar with the disease offer no great diagnostic difficulties. The characteristic blood findings, the absence of free hydrochloric acid in the stomach, the cord changes, and the general appearance of the patient are diagnostic points that quickly suggest the probable diagnosis. However, it is becoming increasingly evident since the advent of specific therapy for pernicious anemia that there are cases being diagnosed as pernicious anemia that in former years would not have been classed as such. The reason for this being that the response to therapy has now become one of the important diagnostic points.

The following case history is presented as an example of the diagnostic difficulties encountered in these cases. The difficulties of diagnosis and the possible errors in therapy in the days previous to 1926 are made very apparent.

CASE REPORT

A business woman, 57 years of age, unmarried, was first examined during October, 1929. She complained of extreme weakness. She stated that this had been noticed since 1922. She had continued to work for about two years but by 1924 she was unable to do any work, due to general weakness. At that time she had no other complaints. At the time of giving up her work five years ago, she was examined by a competent internist and he reports his findings as follows: "The following is a report of our findings made in September, 1924. The patient complained of general weakness of about two years duration. Examination showed a general fullness of the epigastrium with a mass in the upper left quadrant occupying the splenic position. This

also produced a dullness in the left lower chest. The heart was a little enlarged and a little rapid, but no murmurs were present. Knee jerks were brisk. The urine showed transient traces of albumin. The stool analysis was negative, except for three plus mucus. Gastric analysis after an Ewald meal showed 38 degrees of total and 20 degrees of free acidity. She was sent into the hospital for differential diagnosis of the upper left quadrant mass. A barium enema showed a depression of the splenic flexure, but the bowels otherwise were normal. Plain plates of the genito-urinary tract showed the right kidney to be normal. The left kidney was not definitely located. A shadow of soft tissue density was seen partially covering the region of the left kidney and extending high up to the region of the spleen. The spleen, however, was well outlined overlying this other shadow. 'If this is kidney, it is in an unusual position.' A number of phleboliths were present on the left side. X-ray of the chest showed the apices to be clear, but demonstrated rather extensive bronchial and peribronchial infiltrations. A pyelogram made following cystoscopy showed the left kidney enlarged, much ptosed and rotated upon itself. The pelvis was not seen well because of this rotation. Although quite anemic, blood studies were not carried out."

Following this the patient returned home and continued in much the same state of health for the next five years. The only other symptoms noted were a

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very distressing generalized pruritus and areas of subcutaneous hemorrhage, slightly painful, scattered over different parts of the body. These occurred in crops of one or two at a time, gradually turned color and disappeared. These areas were most frequent on the extremities. About 1923 she first noticed a large painless mass occupying a large part of the left side of the abdomen. This persisted with no local symptoms and no appreciable change in size. During the past five years the tongue has frequently been painful for periods of several weeks at a time. The body weight has remained between 97 and 100 pounds during her illness. During the latter half of 1929 she first noted numbness and tingling of the hands and feet, and this has progressed till at the present time she feels quite unsteady on her feet, and at times loses the sense of where her feet are. There is no history of loss of blood, except on one or two occasions there has been a small streak of blood from a hemorrhoid. She has never had any urinary symptoms. The appetite had gradually failed till at the time of examination in October, 1929, she had no desire for food. She never experienced abdominal distress and the bowel movements had always been normal.

Family History.—One sister died with an obscure illness several years ago. She had a very large spleen and also she is said to have had anemia. Any exact details of her illness are not available.

Physical Examination.—The patient appeared to be of about stated age; there was extreme pallor, with a slight icterus of the sclerae. The nutrition was poor, the hair gray, and the patient complained of some generalized itching. The pupils were equal in size, regular in outline, and reacted promptly to light and in accommodation. The teeth had all been removed. The throat was not abnormal. The tongue was not smooth, but the papillae were very small. There was no enlargement of the superficial glands. The thyroid was not felt. A few crackling râles were heard at both lung bases. The heart was not enlarged, regular rhythm, sounds well heard, no murmurs. The blood pressure 133/80. The abdominal wall was on a level with the thoracic cage. A fullness was noted extending down from the left costal margin a handbreadth and a half and reaching almost to the midline of the abdomen. A distinct notch could be felt and the mass did not occupy the flank. The liver was enlarged two inches below the right costal margin with a smooth border and was not tender. Rectal examination revealed a few hemorrhoids externally. Otherwise nothing of importance.

Neurological Examination.—The knee jerks were very sluggish on the right side, absent on the left. Ankle jerks were absent. Sense of position of the legs slightly impaired. A marked impairment of vibratory sense was noted over the long bones of both lower extremities. Sensation to pin-prick normal. No Babinski.

Laboratory Findings.—Blood Kahn negative. The urine, on repeated examination, showed nothing abnormal. Examination of stool showed no evidence of occult blood. Gastric analysis showed an absence of free hydrochloric acid. No blood. Resistance of red cells to hypotonic salt solution. Initial hemolysis .34%. Complete .28%. Normal control—Initial hemolysis .42%. Complete .28%.

Blood Studies.—Hemoglobin .32% (Sahli); R.B.C.'s 1.5 million; W.B.C.'s 24,000. Polymorphonuclear neutrophils 65%; lymphocytes 25%; monocytes 3%; eosinophils 4%; basophils 3%. The platelets appeared normal; red blood cells showed many large oval forms, a few nucleated reds. No myelocytes.

X-ray examination by Dr. H. H. Pool is reported

as follows: "Stereoscopic films of the abdomen and pelvis show normal bone structure of the lumbar spine and pelvis. No calculi are seen. The liver shows apparent moderate hypertrophy, at least it extends below the costal margin further than is normally seen. The lower pole of the right kidney is just at the iliac crest. The left kidney cannot be definitely outlined. We note an elongated kidney-shaped shadow on the left, extending from the region of the diaphragm to below the iliac crest. This is probably an enlarged spleen."

The patient was seen in consultation by Dr. Fredrick A. Collier. He stated that the mass in the left upper abdomen was probably spleen.

Treatment.—The patient was started on Lilly's Liver Extract and within one week showed the characteristic response that patients with pernicious anemia exhibit when given liver. The appetite at the end of one week was excellent. By the end of six weeks the hemoglobin was 90% and the red cells four million. The white count remained the same. The study of the stained smear showed no abnormal blood cells. On December 31st, two months after starting treatment, the examination of the blood was checked by Dr. Cyrus C. Sturgis of the Simpson Memorial Institute. He reported the differential blood count as follows:

	Per cent
Polymorphonuclear neutrophils, adult.....	61.5
Polymorphonuclear neutrophils, young.....	20.5
Eosinophils	4.0
Basophils	3.0
Large lymphocytes	5.5
Small lymphocytes	2.0
Monocytes	3.0
Path. lymphocytes	0.5

The platelets are slightly increased. Red blood cells are normal in shape with some inequality in size.

Subsequent Course.—At the time of admission to the hospital it was discovered that the patient had fever, with an average daily temperature of 102. This continued without symptoms while the patient was under observation, but promptly subsided to normal during the first week after starting treatment with liver extract. The appetite rapidly became normal and had remained so up to the present time (July 1, 1931). She did not gain weight, and the general weakness, although noticeably relieved, has remained to a moderate degree up to the present time. The itching of the skin has continued to be very troublesome. At times this prevents sleep. She was seen by Dr. Udo J. Wile, who found no skin condition present. She was given mild X-ray treatment on several different occasions with no improvement. Up to the present time nothing that we have tried has given any relief for this very distressing symptom. The ecchymoses still recur on the arms and legs in patches varying in size from a dime to a silver dollar. They come on abruptly over night with pain and swelling of the part and during the next two weeks gradually disappear.

Examination of the blood at intervals since October, 1929, up to the present time has shown no change, except for a relative polycythemia. In June, 1930, the blood count was as follows: R.B.C.'s 6,690,000; W.B.C.'s 28,500; hemoglobin 89% (Sahli); the smear showed normal white cells and a preponderance of polymorphs. There was nothing in the character of the white blood cells to suggest leukemia. Repeated examinations of the gastric contents show a continual absence of free hydrochloric acid. Neurological examination indicates progressive cord changes as evidenced by symptoms and vibratory sense. The patient has been examined by Dr. Cyrus C. Sturgis and the blood studies have been

checked by his staff at the Simpson Memorial Institute on several different occasions.

DISCUSSION

This case presents many unusual features. The leukocytes of the blood are uniformly reduced in number during a relapse and are usually between 1,000 and 2,000. Counts of 400 to 600 are not unusual. A leukocytosis speaks strongly against pernicious anemia. The usual response to therapy is a mild leukocytosis during the increase in red cells and hemoglobin, with a return to the normal number after the blood has reached its normal level.

The size of the spleen does not vary a great deal in the majority of cases. Sturgis finds the spleen to be barely palpable in not more than 25% of the cases and never increased so that it is larger than can barely be felt with the hand. Coller tells me that in the days when splenectomy was done for pernicious anemia, the spleens were always smaller than normal. In the present case the spleen became very greatly enlarged. It resembled the size of the spleen seen in myelogenous leukemia. Furthermore it is known that this patient had a very large spleen for at least five years before treatment was instituted.

A certain small percentage of patients have some itchiness of the skin, due to the hemolysis of the blood. Also, a certain small percentage have subcutaneous hemorrhage during a severe relapse. Both of these groups lose these symptoms as soon as the blood count returns to normal. In the present instance, both symptoms persist in a very distressing form.

The average patient gains weight after the beginning of treatment at the rate of about one pound per week. The average gain in weight for a large number of cases was 19 pounds in 20 weeks. This patient improved in strength but the weight remained about the same.

All patients with pernicious anemia have an absence of free hydrochloric acid in the stomach. In the present case it is established that there was a normal amount of free hydrochloric acid five years before beginning

treatment, but that since 1929 there has been a constant absence of free acid in the stomach.

SUMMARY

The case report brings out the following points of interest: A severe anemia with a color index of 1.2; a marked leukocytosis; absence of free hydrochloric acid in the stomach; a very large spleen extending down about eight inches below the costal margin; moderately advanced posterolateral sclerosis; large ecchymoses coming in crops in various parts of the body; severe generalized pruritus, without evident dermatological changes. On being given liver extract, prompt return of the red cells and hemoglobin to normal and maintained in that condition for a period of two years; the size of the spleen remaining the same as at the onset of treatment and the leukocytosis remaining constantly between 16,000 and 24,000 during that interval of time. The study of the stained cells shows no abnormal cells in the circulating blood, after taking liver extract or ventriculin.

The pruritus and ecchymoses continue as before. The cord changes are progressive. The appetite is excellent but the patient remains constantly underweight. Furthermore it brings out the interesting observation that this patient is known to have had a very large spleen for at least five years before treatment was instituted. Also, of equal importance is the established fact that this patient had a normal amount of free hydrochloric acid five years before beginning treatment.

CONCLUSIONS

1. Certain atypical cases of severe anemia are now being diagnosed as pernicious anemia, largely on the basis of their response to liver or ventriculin.

2. Such cases of severe anemia have formerly been classed as Banti's disease or other form of splenomegaly with severe anemia.

3. Blood destruction, as evidenced by large ecchymoses, may persist in patients with pernicious anemia, although the blood count is maintained at a high normal level.

THE BIRTH CONTROL MOVEMENT*

GEORGE KAMPERMAN, M.D., F.A.C.S.†

DETROIT

The development of the Birth Control Movement has been a gradual evolution. This problem has been under discussion in one phase or other for many centuries. It has been closely allied to the eugenic movement. For many years its pros and cons were discussed under the heading of "Limiting of Population." This was at first viewed from the standpoint of the human race as a whole, and the welfare of the race and its relation to food supplies was then the chief topic of debate. And we may say that many an outstanding mind has grappled with, and expressed opinions on, this subject. As the human being became more and more individualistic and the personal rights of man came to be recognized, birth control as it affected the individual or small family group became more and more the topic of controversy.

That individual attempts at contraception have been practiced from time immemorial is without doubt. Biblical references are a testimony to this. And one can hardly conceive of human nature being suddenly so completely altered. It is reasonable to believe that the human race has always indulged in sexual acts even though progeny was not always desired.

At various periods there have been men who have philosophized on this subject from the standpoint of the race rather than that of the individual, and in most instances these men were impressed by the rapid increase in population, the increase being out of proportion to the increase of means of sustenance for the human race. The earlier writers were impressed by the poverty and vice (war) resulting from over-population. Also the higher the birth rate the higher was the infant death rate.

The attitudes and ideas held concerning the methods of limitation of population reveal in a way the ethical standards of each period. Plato and Aristotle both saw a great menace in over-population. And to offset this increase, both advised limiting the period of procreation for all men and women. Plato suggested that the proper age for marriage should be twenty years for women and thirty years for men, and that women should bear children for the state up to forty years of age and men should limit their activity in this respect up to fifty-five years of age. If a child was conceived before or after this

period it was "to be considered in the same criminal and profane light" as if "it had been produced without the nuptial ceremonies, and instigated solely by incontinence." After these years of prime manhood and womanhood Plato's scheme allowed a great latitude of freedom between the sexes, but accompanied this permission with strict orders to "prevent any embryo which might come into being from seeing the light."

"Aristotle appears to have realized this necessity of limitation of offspring still more clearly. He proposed the proper age of marriage at thirty-seven years for the men, and eighteen years for the women, which would of course condemn a great number of women to celibacy, as there never could be as many men of thirty-seven as there were women of eighteen." Aristotle believed that even with this scheme there might be too many children and therefore proposed that the number of children allowed to each marriage should be regulated. And to insure this he suggested that in case of pregnancy after a woman had had the allowed number of children, an abortion should be procured before the fetus had life.

To realize how intimately the idea of limitation of population was related to eugenics we need only to refer to Plato's suggestion for improving the quality of the human race. He proposed "that the most excellent of the men be joined in marriage to the most excellent among the women, and that the offspring should be brought up for the state." And the inferior citizens should be matched with the inferior females and that the offspring "should not be allowed to come to light or should be buried in some obscure and unknown place."

Cultured as these people were in some

*Read before the Kent County (Michigan) Medical Society at its regular meeting held May 25, 1932.

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respects, their ethical standard was still crude. The extreme means proposed to limit increase in population may be taken as a measure of their conception of the magnitude of the difficulty.

In 1798 Malthus in England wrote his essay on Principles of Population. His argument was entirely of population versus food supply. He believed that population increased by a sort of geometrical ratio. He believed that in every locality there were certain natural checks to the increase of population, and it was from his writings that Darwin probably got his idea of the survival of the fittest. He also recognized the importance of emigration from overpopulated countries. He was of the opinion that all over the world the limit of population would soon be reached and that soon there would be no more unoccupied lands to which the excess of population could emigrate. His conclusion was that increase in population should be checked, and to accomplish this he advocated self-restraint and sex-suppression. One sees how far the ethical standard of the world has changed in that no longer was feticide or infanticide suggested as a check to excessive increase.

Following Malthus we have the writings of men like James Mill, John Stuart Mill, Francis Place, Richard Carlile, and Senator Robert Dale Owen, who later became ambassador to France. These men departed from the Malthusian principle in that they began to advocate definite contraceptive proposals instead of sexual suppression, and in consequence their proposals were referred to as Neo-Malthusian in nature.

In a sense it is not strange that this movement received its first support, not from medical men, but from those philosophically and socially inclined. Medical men were following a more narrow line of thought and were then interested more in problems of individuals than in those involving the race at large. However, when in the evolution of this idea the problem began to be more an individualistic problem, and as preventive medicine was just beginning to develop, physicians did begin to be interested in this problem. Dr. Charles Knowlton of Massachusetts was the first to add a noteworthy contribution when in 1833 he published a pamphlet entitled "Fruits of Philosophy." For many years this pamphlet was circulated in this country and in England. In the meantime opposition to the ideas expressed

became so strong that the opponents under the leadership of Anthony Comstock succeeded in establishing legislation in this country which classified and defined birth control literature as obscene literature. To test the validity of a similar law in England, in 1876 the leaders of the free-thought movement, Charles Bradlough and Annie Besant, announced the publication of a new edition of "Fruits of Philosophy" and challenged the right of the police to arrest them. Although the defendants were found guilty the verdict was set aside on technical grounds, and the plea for the Neo-Malthusianism had been given such publicity that interest in it grew by leaps and bounds.

As one reviews the older literature on the subject one is constantly impressed by the importance attached to the question of overpopulation in some countries. And there is no doubt that in some countries this problem has been acute. It gave rise to the necessity of countries having colonies to absorb the excess of population. Since expansion meant simply the seizure of additional territory, war was inevitable in obtaining new lands. The most recent illustration of this is the attempt on the part of Japan to obtain additional territory for her subjects.

In the past, war and epidemic diseases have been the greatest checks to overpopulation. The more war is discarded as a means of settling international disputes, the greater will be the increase in the world's population. The great scourges that formerly depopulated certain countries are now being conquered by preventive medicine and hygiene. As infant mortality is lowered and the span of human life is lengthened population will increase.

To view the question impartially, one may ask whether all these evils of overpopulation are as vital today as they appeared to sociologists a century ago. As mentioned before, the worry of overpopulation at that time was mainly concerning the food supply for the increasing human race. Does that worry exist today, and particularly, does it exist in this country? It is probably fair to state that the problem of food supply is not the same throughout the world. Japan is at present the best example of overpopulation in relation to food supply. And in general this is more true of older countries than of those more recently settled. In this country we must admit that at present overpopulation does not worry us as far as food sup-

plies are concerned. Modern methods of transportation of food-stuffs and intensive methods of production of food-stuffs make it possible to feed an enormous population. If there is hunger in this country it is not because of scarcity of food. It is more likely to be a defect in our social-industrial system in that not sufficient employment can be offered so that the masses can earn enough to purchase from the large food stores at hand. In an industrial nation a continued steady industry is essential and we may ask whether this country is over-populated from that standpoint. In a sense we admit we do have a population problem in this country when we pass immigration laws to discourage immigration. There was a time when we welcomed growth of population. But apparently we are beginning to feel that we can no longer absorb the increases resulting from immigration. We may soon awaken to the fact that "unless a way can be found to call a halt to the present growth of population the struggle for life in the industrial countries must be intensified and the standard of living correspondingly reduced, within the lifetime of the younger generation." Fairchild believes that "under-population exists when the population is too small under existing conditions to permit a society to raise its standard of living to the maximum level that might be possible; over-population exists when the population is too great to permit of the maximum standard." Fairchild further states that it is much easier to avoid over-population than it is to correct it, and is inclined to think that in this country our population has increased beyond the line where the standards of living can be maintained, and he thinks it not unlikely that by the end of the century we may be living under conditions of over-crowding such as prevail in China today.

The individualistic and family reasons for control of offspring have gradually assumed more importance. The increasing higher standard of living has made it more and more difficult to raise large families. The right of womanhood to assert itself has been gradually recognized. Women have won the right to enter many new fields of endeavor and their ability to compete with men cannot be questioned. This competition by women in all lines of work is occasionally a matter of choice but more often it is forced by the economic situation. Woman has gradually asserted and won her inde-

pendence, and among other things she is now demanding that motherhood be voluntary, and she asserts the right to control her own sex life. If motherhood can be controlled so as to fit in with her manner of living she demands the right to do so. Woman has been the patient bearer of heavy maternal burdens for generations, but she now demands the right to regulate to some extent the weight of this burden.

We may here ask parenthetically as to the cause of this apparently new attitude. Let us remember that birth control from the individual standpoint is not new. It is probably as old as the human race. Why, then, all this discussion about it? We might say that this is simply the way the modern age approaches all questions. The former secrecy and hypocrisy is replaced by frankness and candor. The modern age faces the question as it is, faces the facts in the open, and is frank about discussing these problems. This is reflected in all of our activities, as demonstrated by our literature, drama, and painting. The ideas are not new, but the frankness with which these things are discussed gives the impression that a huge change has taken place. Whereas formerly birth control was a secret with the individual, now it has become a topic for public discussion.

For a long time the medical profession has recognized that some women can bear children only with definite risk of health and life. The list of diseased conditions that are aggravated by pregnancy need not be mentioned here. We all know that the occurrence of a pregnancy in the presence of some diseases may mean not only increased illness but even death. The medical profession has been slow even in the face of such indications to adopt a definite scheme of prophylaxis. We have been very vague in the advice we have given such patients, and too often a pregnancy has occurred in such physically unfit individuals and the physician has found it necessary to interrupt the pregnancy in order to avoid jeopardizing the patient's health or to prevent the loss of life.

The medical profession should also recognize the fact that in some patients the bearing of children in quick succession may often have an injurious effect on a patient's health. Many a strong individual has had her health ruined by pregnancies that occurred in too rapid succession. These patients with organic disease and with poor

health due to frequent childbearing present a positive demand for some type of contraceptive.

Besides these maternal considerations, something can be said from the standpoint of the offspring. Not only can a mother's health be jeopardized by a pregnancy occurring in the presence of certain diseases, but the future of the offspring may be materially affected. Since choice of birth is not voluntary with a child, it should at least have the right of being born with a sound body and mind. Syphilologists agree that conception should not occur during the active stages of syphilis.

Psychiatric conditions likewise are a handicap for any child. An ounce of prevention is here worth a pound of cure. In all fairness to the child as well as to society at large, we feel that patients with psychiatric conditions should not reproduce their kind.

Besides these medical reasons for the control of pregnancy, other reasons make a strong demand. Social conditions often make it desirable that the occurrence of pregnancy should be controlled. We recognize the fairness of the patient's request that she be given the right to regulate her childbearing, and space her pregnancies at more or less definite intervals. By so doing the mother can concentrate her attention on one child up to a certain point before the next one demands a repetition of her service. It would change the mother's life from one of involuntary drudgery to one of voluntary service. There can be no doubt that the undesired pregnancy is the cause of the abortion tragedy of this age. The intelligent use of an efficient prophylactic method would do a great deal towards solving the abortion evil, and prevent the high mortality and morbidity accompanying it.

Our standards of living, whether right or wrong, are now such that the rearing of a large family is becoming more and more difficult and we feel there is a great deal of justice in the patient's assertion that she prefers to bring up a smaller family to a higher standard, rather than a larger family to a lesser standard.

The social indication for birth control is closely allied to our economic situation, and never has it been more opportune to give thought to this question than at the present moment. In many families the economic situation is such that the question of proper obstetrical care is a problem and the care of

an additional child on the limited income creates almost a hopeless despair. Among the indigent this is an important social problem and a small investment in a contraceptive clinic may save the community a large welfare budget at a later date.

The statement is sometimes made that if the knowledge of contraceptive measures becomes too general the human race will gradually decrease. One making such an assertion is plainly not acquainted with the facts. The population of Holland, for instance, has not suffered seriously from publicity of birth control matters, although Holland has had birth control clinics since 1878. The maternal instinct is present in nearly all women, and most women will sooner or later have the desire to have a child, and when that wish springs up within her no amount of birth control propaganda will prevent her from having her desire. It is a common experience to discover that patients to whom contraceptive advice has been given return in a pregnant state and on analysis we learn the pregnancy was wanted and did not occur because of failure of the contraceptive method. The future of the race will always be safe because of this maternal instinct.

The birth control movement is often subjected to criticism on the ground that it will encourage immorality. This may be viewed from a different angle, however. It is more logical to deduce that birth control by encouraging earlier marriages will be a definite factor in reducing extra-marital sex relations. Francis Place in 1822 wrote that he virtually owed his moral salvation to a very youthful marriage, but that this same marriage had burdened him with fifteen children and filled his early years with the hardest poverty. He concluded that the only solution of the poor man's population problem was early marriage and limitation of family. He gives his views in "Illustrations and Proofs of the Principles of Population," published in 1822.

In all our discussion of this problem, we must not lose sight of the fact that it is one thing to be enthusiastic over the idea or principle of birth control, and another thing to solve the practical technic. We feel that womankind at large should have the right to control, if possible, her offspring. In advocating this we must not forget that the successful use of our present methods of contraception depends somewhat on the pa-

tient having mentality enough to follow instructions closely. We face the fact that we may successfully control reproduction of the intelligent, but run the risk of failing with those of lesser intelligence. This would create an unfortunate state of affairs and would be a violation of the principle of eugenics. A great deal of research must still be done to discover if possible a simple contraceptive method that will not require too much intelligence to use. We must remember that there are still limitations to the practice of contraception.

The knowledge that our methods are still far from perfection causes us at times to stand somewhat awed at the enthusiasm displayed by some individuals who apparently seem to think that if the world will only embrace the idea of contraception and endorse the principle, that then the problem will be solved. Intelligent enthusiasm and zeal will help any cause. Scientific research in this field is only in its infancy and it is here where a great deal of effort must be spent in order to find a solution for this problem.

Members of the medical profession in general have not been leaders in this movement. A great deal of writing on this subject had been done by philosophers and socially inclined thinkers before the first contribution by a medical man appeared. This contribution was by Dr. Charles Knowlton in 1833 and his pamphlet, previously referred to, was entitled "Fruits of Philosophy." This was followed in 1854 by "The Elements of Social Science," by Dr. George Drysdale. In 1912 Dr. Abraham Jacobi in his presidential address before the American Medical Association endorsed hygienic prevention of pregnancy. In 1924 Dr. William A. Pusey in his presidential address before the same society urged the necessity of contraceptive work. In 1923 the New York Obstetric Society determined to include the birth control problem as a part of its program. The resulting committee which was formed and of which Dr. R. L. Dickenson was Secretary did a great deal of research work, and as a result the propaganda for birth control has been supported by scientific work of medical men. Although contraceptive methods had been taught in Holland for considerable time this committee of American medical men deserve the credit for placing this work on a scientific basis. By a system of follow-up work the efficacy

of the different methods of contraception was studied.

Although certain medical men have thus helped in the solution of this problem, the general rank and file of the profession have to a large extent been indifferent or lukewarm to all proposals. Due to the work and enthusiasm of Margaret Sanger the propaganda has been spread far and wide and the demand for information on this subject has been created. The idea is here, and doubtless here to stay. Medical men must decide what their attitude will be. The movement still requires a great deal of sane judgment, and there is still room for medical men to exert their influence and assert their leadership.

The legality of birth control advice or practice is often questioned. This phase of the problem dates back to 1869 when, as previously mentioned, Anthony Comstock succeeded in inducing the legislature of the State of New York to include birth control information in an obscenity law, and in 1873 through Comstock's efforts Congress enacted a statute excluding information concerning contraception from the United States mails, and declaring such information illegal and obscene. In 1918 Judge Crane of the New York Court of Appeals decided that the legally practicing physician can legally give contraceptive advice for the protection of health and the prevention of disease.

About one-half of the States in this country mention prevention of conception in their laws in some guise or other. The Michigan law is as follows:

"The publication or sale within this State of any circular, pamphlet or book containing recipes or prescriptions in indecent or obscene language for the cure of chronic female complaints or private diseases, or recipe or prescription for drops, pills, tinctures, or other compounds designed to prevent conception, or tending to produce miscarriage or abortion is hereby prohibited and for each copy thereof so published and sold, containing such prohibited recipes or prescriptions, the publisher and seller shall each be deemed guilty of a misdemeanor and shall be liable to same penalties for a violation of preceding section."

This is interpreted as intending to prohibit the publishing and distribution of information on prevention of conception. It does not prohibit publishing a discussion on the

subject of birth control, and it does not prohibit the giving of verbal information or advice on prevention of conception. Thus the giving of contraceptive advice is legal in this State as long as the advice is given verbally.

One of the chief activities of the American Birth Control League is the effort it is making to so change our Federal laws that birth control literature will no longer be classed as obscene literature and will no longer be denied transportation via United States mail.

As mentioned before, the birth control movement still offers opportunity for leadership and guidance to medical men. The movement deserves the support of medical men as individuals as well as that of medical organizations. The problem is as yet by no means solved. There is still room for study and research. The movement is shackled by antiquated laws. Medical men can have a great influence in the dictating of

sane laws. We bespeak for the movement the sympathy, support and endorsement of medical men not only as individuals, but as an organized professional group.

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 1807 DAVID WHITNEY BLDG.

CHRONIC POLYPOID MAXILLARY AND ETHMOID SINUSITIS WITH ASTHMA*

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DETROIT, MICHIGAN

CASE REPORT

The relation between paranasal sinusitis, especially of the polypoid type, and some cases of asthma has been recognized for years. Whatever may be the primary cause of asthma in a given case, nasal pathology may be the trigger causing the explosion of the asthmatic attack. An asthmatic paroxysm may be looked upon as a reflex neurosis depending upon afferent irritation of the trigeminal nerve endings in the nose on the efferent vagus nerve fibres through their connections via the bulbar nuclei of these nerves. For example, cocaine to the nasal mucous membrane may in some instances stop an asthmatic attack. The following is a case of bronchial asthma co-existent with polypoid degeneration of the mucous membrane of all the paranasal sinuses, most pronounced in the ethmoid and maxillary sinuses.

Mr. C. W., age 53, was a former salesman by occupation. He was first seen in the clinic on June 8, 1931. His chief complaint consisted of difficult breathing through the nose, asthmatic attacks day and night, continuous clearing of his throat, a watery nasal discharge and some frontal headaches. He stated his trouble began with bronchitis 12 years

ago. He has had nasal blockage ever since. His asthmatic attacks are not seasonal. He further stated that he had had 145 foreign protein skin tests, all of which were negative.

The general physical examination of the patient was essentially negative, except for an asthmatic chest. With relation to the upper respiratory tract much of interest was found. In the nose there was seen a double serous nasal discharge in both anterior nares, the septum badly deviated to the right anteriorly.

There were multiple polypi in the left nares; some were also present in the right nares, but these were seen better after shrinkage of the mucous membrane. Following suction there was a heavy purulent discharge apparently from both middle meati. On posterior rhinoscopy several small polypi were seen in the nasopharynx. All sinuses were definitely cloudy on transillumination and X-ray films showed

*Read before the monthly staff meeting at Grace Hospital, Detroit, Michigan, November, 1931.

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a pansinusitis, but with most of the involvement in the maxillary and ethmoid sinuses.

The throat showed a mild chronic tonsillitis, and the larynx showed a chronic injection of the entire mucous membrane, including that of both vocal cords. Blood examination revealed a negative Kahn, 10 mg. of calcium per 100 c.c., and a practically normal red and white cell count. The urine was negative. X-ray plates of the chest revealed a moderate degree of the hilar lymph gland enlargement and some emphysema throughout the entire lung fields. The heart shadows were normal.

On June 20, 1931, I advised a submucous resection, a double ethmoidectomy, and a double radical antrum operation. Nine days later this procedure was done under local anesthesia and extensive polypoid degeneration of all the sinuses named was found. Sections were made for microscopic study of the polypoid tissue and it showed very strikingly a high degree of eosinophilia. Mosher, of Boston, and his co-workers claim that this is quite a constant finding in the mucous membranes of the paranasal sinuses where the condition co-exists with asthma and certain other allergic phenomena.

His postoperative condition was good and he had complete relief of headaches and asthma. After four days in the hospital he was discharged, and was seen thereafter at three to four day intervals in the clinic. The treatment consisted of removal of debris and irrigation with normal saline solution of each maxillary sinus through the antral windows.

On July 30, he contracted an acute coryza with some asthmatic recurrence. The antral windows remained well open, the incisions in each canine fossa were entirely healed, but pus drained freely from the ethmoid labyrinths. The nasal passages were irrigated with saline solution and argyrol packs were inserted into these areas and the patient was given sodium bicarbonate, grains 10 every three hours, for alkalization.

On August 8, he was again seen and it was found that he still had some asthma but the coryza was gone. The breathing space in his nose was very good.

On the next visit, August 13, the patient's general condition was very much improved, had occasional asthmatic attacks, but these were more at night

and were not continuous. A small piece of polypoid tissue was removed from the right posterior ethmoid area with a nasal snare; otherwise airways were entirely clear, no other polypi were to be seen and nasal breathing was entirely reestablished.

On September 5, he still had some asthma and a bronchoscopy was deemed advisable and he was referred to Drs. Hudson and Birch for that procedure. I quote their findings verbatim: "A seven millimeter bronchoscope was passed in the usual manner. The trachea was found to be non-spastic but contained a large amount of thick, tenacious secretion. Both bronchi were filled with secretion of the same character and this was removed by suction.

"On September 22, a similar examination was made and the bronchoscope passed more easily into the left and right stem bronchi. A moderate amount of spasm was present. Much less thick tenacious secretion was aspirated.

"The third and last bronchoscopic examination was made on September 29, and only a slight amount of secretion and practically no spasm were present in each stem bronchus. In general the patient showed very marked improvement at that time."

The patient was lost sight of until March 26, 1932, when he returned to the clinic. He reported he had no asthma, had gained 15 pounds in weight. His nasal passages were clear, no polypi or discharge were seen. He said he had had a few mild "head colds" but even these did not cause any asthmatic attacks.

I report this case merely as a record of events in the diagnosis and treatment of it and have purposely avoided the discussion of the allergic aspect, although I do not deny that it probably existed.

My thanks are due to Drs. W. A. Hudson and J. R. Birch for their kindness in performing the bronchoscopic examinations and for helpful suggestions.

1026 MACCABEES BLDG.

MICHIGAN'S DEPARTMENT OF HEALTH

C. C. SLEMONS, M.D., DR.P.H., Commissioner

LANSING, MICHIGAN

POLIOMYELITIS

The Michigan Commission on Infantile Paralysis held a meeting on June 22 and made organization plans for providing consultant service and convalescent serum during the "poliomyelitis season" this year.

The state has been divided into 16 districts with a district director in charge of each. These district directors have appointed such consultants as they considered necessary. No funds are provided by the commission for consultant service and those physicians who are acting as consultants will collect in the usual way from the individual.

Convalescent serum is again provided without charge for those cases for whom it is recommended by the consultant.

Up to the date of this writing, July 30, there has been no indication of an outbreak such as occurred last year. The number of cases reported from July 1 to July 30 is 6, as compared to 29 for the same period last year.

Physicians desiring consultant service and convalescent serum should call the director of their district or a consultant appointed by that director. The list of districts and the director for each is as follows:

1. Dr. Moses Cooperstock, Director, Marquette
All Upper Peninsula—15 counties
2. Dr. Carleton Dean, Director, Charlevoix
Emmet, Charlevoix, Otsego, Antrim, Grand
Traverse, Leelanau—6 counties
3. Dr. R. B. Howard, Director, Rogers City
Cheboygan, Presque Isle, Montmorency, Alpena—4 counties
4. Dr. S. C. Moore, Director, Cadillac
Wexford—1 county
5. Dr. Stanley A. Stealy, Director, Grayling
Kalkaska, Crawford, Missaukee, Roscommon—4 counties
6. Dr. T. H. Johnston, Director, West Branch
Oscoda, Alcona, Ogemaw, Iosco—4 counties
7. Dr. L. J. Schermerhorn, Director, Grand Rapids National Bank Bldg., Grand Rapids
Oceana, Newaygo, Mecosta, Muskegon, Benzie, Montcalm, Mason, Lake, Osceola, Manistee, Ottawa, Kent, Ionia—13 counties
8. Dr. L. F. Foster, Director, Shearer Bldg., Bay City
Clare, Gladwin, Arenac, Isabella, Midland, Gratiot, Saginaw, Bay—8 counties
9. Dr. Lafon Jones, Director, Genesee County Savings Bank Bldg., Flint
Huron, Tuscola, Sanilac, Genesee, Lapeer, Saint Clair—6 counties
10. Dr. E. I. Carr, Director, Medical Bldg., Lansing
Clinton, Shiawassee, Eaton, Ingham, Livingston—5 counties
11. Dr. A. B. Mitchell, Director, Allegan
Allegan, VanBuren, Berrien, Cass—4 counties
12. Dr. M. R. Kinde, Director, Hastings
Barry—1 county
13. Dr. John Lavan, Director, City Hall, Kalamazoo
Kalamazoo, St. Joseph—2 counties
14. Dr. H. F. Becker, Director, 61 W. Main St., Battle Creek
Calhoun, Branch—2 counties
15. Dr. J. P. Parsons, Director, University of Michigan, Ann Arbor
Oakland, Macomb, Jackson, Hillsdale, Lenawee, Monroe, Washtenaw, Wayne (excluding Detroit)—8 counties
16. Dr. J. E. Gordon, Director, Detroit Department of Health
Detroit City

Note: The Commission provides serum without cost for those cases approved by Regional Directors or their duly appointed consultants, but does not provide compensation for services of consultants.

TYPHOID FEVER

Typhoid fever incidence is considerably higher this year than for several previous years. Not only has there been a number of small outbreaks, but also a greater than usual number of sporadic cases. Typhoid fever is by no means completely eliminated in Michigan.

Physicians are urged to be on the lookout for cases and to report all cases to the local health officer as early as possible. Patients suspected of having typhoid should be reported promptly so that investigation of possible sources may be started without the delay that often results from waiting for development of clinical characteristics and positive laboratory findings.

Family and other close contacts should be immunized promptly. The delay in waiting for a positive diagnosis in the first case before immunizing the contacts often results in secondary cases.

No harm is done if investigation for a possible source is started by the health officer for a suspected case which afterwards proves not to be typhoid. Likewise no harm is done by immunizing contacts of such a suspected case.

BIOLOGICS

All physicians in the state are being furnished with cards giving a list of the biologics supplied without cost to any physician in Michigan by the Michigan Department of Health. Where the city or the county health officer keeps a supply of these biologics in stock, physicians will find it to their advantage to secure them from that source. Where this is not the case, the Michigan Department of Health will promptly take care of any requests.

The list of biologics furnished by the Michigan Department of Health is as follows:

BIOLOGIC PRODUCTS MANUFACTURED AND DISTRIBUTED BY MICHIGAN DEPARTMENT OF HEALTH

in coöperation with

UNITED STATES PUBLIC HEALTH SERVICE

U. S. Government License 99

Diphtheria Antitoxin, 1000 units
Diphtheria Antitoxin, 10000 units
Diphtheria Antitoxin, 20000 units

Diphtheria toxin for Schick test, 1 c.c. vials, 10 tests
Diphtheria toxin for Schick test, 10 c.c. vials, 100 tests
Diphtheria toxin for Schick test, heated control, 1 c.c. vial, 10 tests
Diphtheria toxin for Schick test, heated control, 10 c.c. vial, 100 tests

Diphtheria Toxoid for active immunization, 1 complete treatment package
Diphtheria Toxoid for active immunization, 10 c.c. vials
Diphtheria Toxoid for active immunization, 50 c.c. vials
Diphtheria Toxoid for reaction test, 1 c.c. vials

Scarlet fever antitoxin, therapeutic dose

Scarlet fever toxin for active immunization, 1 complete treatment package

Scarlet fever toxin for Dick test, 10 c.c. vials, 100 tests

Smallpox vaccine, 2 tube package
Smallpox vaccine, 5 tube package
Smallpox vaccine, 50 tube package

Silver nitrate, 1½%, 5 ampoules per package

Typhoid vaccine, 1 c.c. vials
Typhoid vaccine, 10 c.c. vials

(Continued on Page 615)

KALAMAZOO • CIVIC • AUDITORIUM



112TH ANNUAL MEETING—OFFICIAL PROGRAM—KALAMAZOO, SEPTEMBER 13-15, 1932

OFFICIAL PROGRAM

112th Annual Meeting Michigan State Medical Society
September 13, 14 and 15, 1932

OFFICIAL CALL

The Michigan State Medical Society will convene in annual session in Kalamazoo on Sept. 13, 14, 15, 1932. The provisions of the Constitution and By-laws and the official program will govern the deliberations.

CARL F. MOLL, *President*

B. R. CORBUS, *Chairman Council*

H. J. PYLE, *Speaker*

Attest:

F. C. WARNSHUIS, *Secretary*

MEETING PLACE

FIRST PRESBYTERIAN CHURCH HOUSE and
CIVIC AUDITORIUM

CHURCH HOUSE

Registration

Exhibits

House of Delegates

CIVIC AUDITORIUM

General Sessions

Combined Sectional Meetings

CONDENSED DAILY SCHEDULE

Tuesday (Sept. 13)	Wednesday (Sept. 14)	Thursday (Sept. 15)	Memorandum
10:00 A.M. House of Delegates	9:15 A.M. Section Meetings Medicine Surgery Gynecology and Obstetrics E. E. N. and T. Pediatrics Dermatology	9:15 A.M. Section Meeting Medicine Surgery Gynecology and Obstetrics E. E. N. and T. Pediatrics Dermatology	1. Registration: Church House 2. Scientific and Commercial Exhibits: Church House 3. Combined Meetings: Civic Auditorium 4. General Meeting: Civic Auditorium 5. House of Delegates: Civic Auditorium 6. Section Meetings: See Bulletin Board —o—
Afternoon	Afternoon	Afternoon	
2:30 P.M. House of Delegates	1:15 P.M. Combined Meeting [All Sections]	1:15 P.M. Combined Meeting [All Sections]	
7:30 P.M. House of Delegates	7:30 P.M. General Meeting President's Address	7:45 P.M. Public Meeting Morris Fishbein, M.D. Address	NOTICE Do not fail to visit Scientific and Commercial Exhibits in Church House. —o—

GENERAL MEETING

Wednesday Evening, September 14, 1932

Time: 7:45 P. M.

Place: Civic Auditorium.

1. Musical Prelude.
2. Invocation: Rev. John W. Dunning.
3. Welcome: R. A. Morter, President Kalamazoo Academy of Medicine.
4. Report from House of Delegates.
5. Ideals of the Profession—Dr. Olin West, Secretary and General Manager, American Medical Association, Chicago.
6. President's Annual Address: "Some Phases of Medical Economics"—Carl F. Moll, M.D., Flint.

7. In Memoriam—the Secretary.
8. "Leadership in the Solution of National and Local Health and Medical Problems"—E. H. Carey, M.D., President American Medical Association, Dallas, Texas.
9. Introduction of President-Elect.
10. Induction in Office of J. Milton Robb, M.D., Detroit.
11. Adjournment.

Second General Session

Thursday Evening, September 15, 1932

Time: 8:00 P. M.

Place: High School Auditorium.

1. Introductory Remarks: R. A. Morter,

President Kalamazoo Academy of Medicine.

2. "The Communities' Responsibility to the Medical Profession," Morris Fishbein, M.D., Editor Journal American Medical Association, Chicago.

COMBINED SECTION MEETINGS

CIVIC AUDITORIUM

Wednesday, September 14—1:15 P. M.

1. "Allergy in Medical Practice"—Warren Vaughan, M.D., Richmond, Va.
2. "Can the Person with Heart Disease Stand an Operation?"—Samuel A. Levine, M.D., Boston.

Three questions arise that a physician has to answer:

- (1) Is the condition for which the surgeon wishes to operate really surgical? Some cardiac disorders resemble an acute surgical abdomen.
- (2) Does the patient with organic heart disease merit the surgery that is being contemplated? The prognosis of the heart may be too brief to warrant an operation for which there is available palliative medical treatment.
- (3) What is the increased risk in an operation that is to be performed, because of the heart disease that is present? As to the latter, most compensated hearts stand an operation satisfactorily.

3. "Mammary Neoplasms"—R. R. Smith, M.D., Grand Rapids.
4. "The Treatment of Pneumonias"—George E. McKean, M.D., Detroit.
Following the discussion of the evolution in the understanding of pneumonia, there will be a résumé of the standard bedside handling of a patient with the disease and an evaluation of the efficacy and applicability of the various specific and non-specific anti-sera available at present.
5. "Perforated Acute Gastric Ulcers"—H. K. Shawan, M.D., Detroit.
6. Talking Motion Pictures—"Cardiac, Vasomotor and Respiratory Phenomena"; "Signs and Symptoms of Raised Intra-cranial Pressure" (Courtesy Petrolagar Laboratories).

No discussions during afternoon sessions.

Thursday, September 15—1:15 P. M.

1. "The Diagnosis of Mastoiditis and Its More Frequent Complications"—Mil-lard F. Arbuckle, M.D., St. Louis, Mo.
Review of the history of conditions prior to and the etiological factors concerned in acute mastoiditis.
Appearance of the anatomical parts concerned, with discussion of the changes occurring during each stage of the disease.

Discussion of the signs and symptoms of the more frequent complications with suggestions as to treatment.

2. "Posture"—Joel E. Goldthwait, M.D., Boston, Mass.

The importance of the proper mechanical function of the different parts of the body as the basis of health, and especially as it concerns the problem of the chronic patient. This, as you will see, treats of the correct use of the body, which, in one sense, means proper posture, but treats it more as a scientific matter and deals, naturally, with not only the mechanics of the skeleton and muscular tissue but with reference to the viscera and all that concerns health, and much of that which concerns life.

3. "Diagnosis and Management of Pre-mature Detachment of Normally Im-planted Placenta"—Fred Falls, M.D., University of Illinois, Chicago.
4. "Treatment of Varicose Veins"—Eugene A. Osius, M.D., Detroit.
Milne C. Harvey, M.D., Detroit.
5. Talking Motion Picture: "Maggot Treatment for Chronic Osteomyelitis." (Courtesy Petrolagar Laboratories.)

SCIENTIFIC PROGRAM

General Medicine

Chairman: RICHARD M. MCKEAN, Detroit.
Secretary: IRVING W. GREENE, Owosso

September 14—9:15 A. M.

1. Chairman's Address—"Diabetes and Tuberculosis"—Dr. Richard M. McKean, Detroit, Michigan.

The basis for this discussion lies in the observation over a period of better than three years, of a group of patients afflicted with both of the above diseases. The importance of the maintenance of a normal blood sugar level by means of diet and insulin is stressed. With this major premise fulfilled, the tuberculosis may be treated as in the non-diabetic not including such major surgical procedures as thoracoplasty, although careful observation from the diabetic side again is a necessary factor during this period. A few descriptive cases will be outlined to emphasize the frequent success attendant on the cooperative management of both the tuberculosis and diabetes by individuals familiar with the modern development in these two fields.

2. "New Concepts in the Treatment of Diabetes"—Dr. L. H. Newberg, Ann Arbor, Michigan.

Current literature states that the ability of a diabetic to metabolize glucose is increased by adding carbohydrate to the diet and decreased by fat and by full maintenance diets. The authors deny this, for properly planned experiments show that the tolerance (ability to

metabolize glucose) is related solely to the total glucose of the diet (metabolic mixture). The number of grams of glucose metabolized by a unit of insulin is proportional to the excess of glucose beyond tolerance until a maximum is reached. A diabetic whose tolerance was 76 grams glucose required 10 units of insulin when he took 90 grams glucose. Each unit disposed of 1.4 grams. An intake of 106 grams also required 10 units, giving an efficiency of 3. When 123 grams of glucose were taken, 10 units of insulin were still sufficient. The efficiency was now 4.7. An intake of 174 grams required 14 units. The efficiency of 7 now reached could not be increased, for an intake of 274 grams required 30 units, indicating an efficiency of 6.8.

Discussion—Dr. Don H. Duffie, Central Lake, Michigan; Dr. Daniel P. Foster, Detroit, Michigan.

3. "Nephritis"—Dr. Floyd H. Lashmet, Ann Arbor, Michigan.

The process of excretion of waste products in renal disease is fundamentally one which avoids the retention of solids by increasing the water output as a compensation for a low concentrating ability. In renal disease, regardless of type or whether edema is present or absent, an enormous fluid intake is imperative if retention of wastes is to be avoided.

Discussion—Dr. Alpheus Jennings, Detroit, Michigan; Dr. W. H. Marshall, Flint, Michigan.

4. "Arteriosclerosis and Hypertension"—Dr. C. G. Jennings, Detroit, Michigan.

Arterial hypertension may be primary, essential hypertension or secondary, a complication of one of several diseases. May be benign or malignant. Etiology. Relation of hypertension to arteriosclerosis. Three forms of arteriosclerosis—diffuse hyperplastic sclerosis, atherosclerosis, derescent arteriosclerosis. Each form has distinctive etiology, pathology, and symptoms. Each may exist alone or combined with others. Clinical histories of three forms. Demonstration of pathology and laboratory findings with lantern slides.

Discussion—Dr. C. C. Sturgis, Ann Arbor, Michigan; Dr. Plyn Morse, Detroit, Michigan.

5. "Treatment of Acute Coronary Thrombosis"—Dr. Samuel Levine, Boston, Massachusetts.

There are many patients with acute coronary thrombosis who die despite everything we can possibly do. There are many others who recover satisfactorily if nothing is done. There remain a few in whom proper therapy will make the difference between life and death. The physician, therefore, must be able to detect the various complications that can arise and institute proper treatment.

Discussion—Dr. Frank Wilson, Ann Arbor, Michigan; Dr. Earl D. Spaulding, Detroit, Michigan.

Dr. Levine is Assistant Professor of Medicine at the

Harvard Medical School, Senior Associate in Medicine at Peter Bent Brigham Hospital, Boston, Massachusetts, and Visiting Physician at Beth Israel Hospital, Boston, Massachusetts.

September 15—9:15 A. M.

Election of Officers

1. "The Classification, Etiology and Present Status of the Treatment of Chronic Arthritis"—Dr. Joseph L. Miller, Chicago, Illinois.

There is need for classification in this disease because there is great confusion at the present time. Two very distinct types can be recognized and if we combine with these the mixed forms—that is, where both types are combined in the same patient—practically every case can be classified.

The pathology of the joint shows that we are dealing with two diseases of distinct etiology. Osteo-arthritis is due to mechanical irritation or trauma and not to infection; rheumatoid arthritis is an infective disease.

In regard to treatment, I will discuss the importance of focal infections; the use of vaccines; orthopedic measures; and diet.

Discussion—Dr. Hugo A. Freund, Detroit, Michigan; Dr. Carl E. Badgley, Ann Arbor, Michigan.

Dr. Miller is Clinical Professor of Medicine at the University of Chicago Clinic and Attending Physician at St. Luke's Hospital.

2. "Migraine, Particularly as an Allergic Manifestation"—Dr. Warren T. Vaughan, Richmond, Virginia.

Discussion—Dr. Carl D. Camp, Ann Arbor, Michigan; Dr. Frank R. Menough, Detroit, Michigan.

Dr. Vaughan was born in 1893. He graduated from the University of Michigan in 1916. He is a member of the American Society of Clinical Pathologists and the author of many articles on the subject of allergy.

3. "Neurological Diagnosis"—Dr. Carl D. Camp, Ann Arbor, Michigan.

The neurological examination consists of three distinct parts. First a study of the reflexes, the motor functions of the body, and the sensory perceptions. The object of which is to determine the location and extent of destructive lesions of the nervous system. The second phase includes such examinations as the spinal puncture, the determination of spinal block, the chemical and bacteriological examination of the spinal fluid, the making of encephalograms, etc. The object of these studies is also of localizing importance, but often throws light on the nature of the lesion as well. The third phase might be called the psychoanalysis, which includes much more than ordinary history taking. The important facts are only elicited by an exploration of the subconscious. The methods used are free association, reaction time tests, dream analysis, etc.

Discussion — Dr. Fred P. Currier, Grand Rapids, Michigan; Dr. Gordon Brain, Flint, Michigan.

4. Joint meeting with the Surgical Section.
Clinical Pathological Conference—Medical Discussion: Dr. Cyrus C. Sturgis, Ann Arbor, Michigan.

Surgery

Chairman: JOHN ALEXANDER, Ann Arbor.
Secretary: G. J. CURRY, Flint.

September 14, 1932—9:00 A. M.

1. "Intestinal Obstruction"—Dr. R. L. Mustard, Battle Creek.
Discussion—H. K. Ransom, A.B., M.D., Ann Arbor; R. S. Morrish, B.S., M.D.

2. "Pre-Operative Care of Patient"—Dr. R. H. Baker, Pontiac.

The present status of the surgical specialist, in relation to patient, hospital and laboratory; his obligation in obtaining careful history and physical examination. Preparation of the patient, mentally, physically, locally. Suggestions concerning fluid balance, and preparation for special fields of surgery. Preparation and selection of anesthetic, with special reference to general versus spinal anesthesia. Summary: A plea for elimination of complicated traditional routine and emphasis on simplicity with due regard to physiological needs.

Discussion—W. L. Finton, M.D., Jackson; A. L. Arnold, Jr., M.D., Owosso.

3. "Post-Operative Care of Patient"—Dr. F. A. Collier, Ann Arbor.

Studies of end-results emphasize the frequency of postoperative complications, many of which can be anticipated and prevented. The common complications such as dehydration, distention, acidosis and alkalosis are discussed, with suggestions for treatment.

Discussion—Geo. L. LeFevre, M.D., Muskegon; G. Seibold, M.D., Jackson.

4. "Traumatism of the Brain"—Dr. H. E. Randall, Flint.

Subject of brain injuries introduced by four brief reports to illustrate pathology, symptoms, diagnosis, and care of these cases. Glucose in shock and edema. Better results both immediate and remote by dehydration, spinal puncture and drugs. Operations necessary but last resort, and should be fewer in number.

Discussion—M. M. Peet, M.A., M.D., Ann Arbor; A. S. Crawford, B.S., M.D., Detroit.

5. "Empyema"—Dr. S. W. Harrington, Rochester, Minn.

Discussion—E. J. O'Brien, M.D., Detroit; Clyde I. Allen, Detroit.

6. "A New Method of Skin-graft."—C. V. Russell, M.D., Lansing.

Morning, Dry Clinic

September 15, 1932—9. A. M.

1. "Diagnosis and Treatment of Goiter."—Dr. C. E. Boys, B.Sc., Kalamazoo.
An informal résumé with the exhibition of patients to illustrate.
The non-toxic case. The typical goiter with toxicity and the results of thyroidectomy. The toxic thyroid with few clinical symptoms and negative B.M.R. The relation of a high toxicity and a pathological report of "simple colloid." The relation of goiter to insanity. Failures and recurrences.

2. "Important Little Things in the Treatment of Anal Diseases"—Dr. L. J. Hirschman, Detroit.

3. "Amputations, with Particular Reference to Preparation of the Stump"—Dr. C. E. Badgley, Detroit.

4. "New Methods of Relieving Prostatic Obstruction"—Dr. Reed Nesbit, Ann Arbor.

5. "Management of Colles Fracture"—Dr. Grover C. Penberthy, Detroit.

General discussions on each paper lasting three minutes.

Gynecology and Obstetrics

Chairman: N. F. MILLER, Ann Arbor
Secretary: H. A. FURLONG, Pontiac.

First Day—September 14, 1932

9:00 A. M.

1. Chairman's Address—Dr. N. F. Miller, Ann Arbor, Michigan.

2. "Functional Disorders of the Ovary"—Dr. J. P. Pratt, Henry Ford Hospital, Detroit, Michigan.

Functional disorders of the ovary are more common than organic lesions. Diagnosis of the type and degree of disorders should precede therapy. Variations from normal functions are often difficult to determine. Menstrual irregularities are most easily observed indicators of the state of ovarian function. Classification of ovarian disorders is difficult. Results of treatment are compared.

3. "The Gynecological Symptoms in the Maladjusted Woman"—Dr. B. W. Malfroid, Flint, Michigan.

In Gynecology today increasing emphasis is being placed on the influence of environment and social adjustments upon the emotional reactions of the patient. Changing social and economic conditions of modern life and their reflection in various physical signs and symptoms among women are discussed and illustrated with case reports.

4. "Prenatal Care and Its Importance"—Dr. Howard O. Brush, Port Huron, Michigan.

The importance of prenatal care and its newer aspects are stressed. Just what the obstetrician can hope to accomplish, especially in the prevention of toxemias, is given prime consideration.

5. "A Consideration of Puerperal Infection"—Dr. M. J. Lieberthal, Ironwood, Michigan.

The ever present hazard of puerperal morbidity and mortality warrants repetition and consideration of etiological factors as well as newer methods of treatment. A case report of a patient with unusual complications is included.

Second Day—September 15

9:00 A. M.

1. "Scopolamine Alone for the Relief of Pain During Labor"—Dr. L. E. Daniels, Detroit, Michigan.

The results of the use of scopolamine in five hundred labors for the production of amnesia and analgesia without morphine is discussed. The advantages and disadvantages over other common drugs are presented. Its effect upon the baby and mother, and its limitations are considered.

2. "The Use of Sodium Amytal and Avertin in Obstetrics"—Dr. W. C. Ellet, Benton Harbor, Michigan.

The use of sodium amytal and avertin, in the opinion of the author, has a proper and useful field in obstetrics. Without considerable contra-indications or dangers, it approaches closely the ideal obstetrical anesthesia. The apparent synergistic action of these two drugs is considered.

3. "Contraception"—Dr. E. M. Matsner, New York, Medical Director, American Birth Control League.
4. "Sodium Amytal and Pernocton in Obstetrics"—Dr. B. L. Lieberman, Detroit, Michigan.

The methods of administration and results from the use of these drugs during labor are discussed by the author. The drawbacks as well as the advantages are carefully considered.

Pediatrics

Chairman: T. D. GORDON, M.D., Grand Rapids

Secretary: CAMPBELL HARVEY, M.D., Pontiac

First Session

September 14, 1932—9:00 A. M.

1. "Bacteriophage"—Dr. N. W. Larkum, Lansing.
2. "Cod Liver Oil Concentrates"—Dr. D. J. Barnes, Detroit.
3. "Anomalies of the Genito-urinary Tract in Children"—Dr. C. M. Spooner, Toronto, Ont.
4. "Infantile Eczema"—Dr. Francis E. Senear, Chicago.
5. Open.

Second Session

September 15, 1932—9:00 A. M.

Election of Officers.

1. "The Relation Between Cerebral Plegia and Birth Injury"—Dr. T. D. Gordon, Grand Rapids.
2. "Therapeutic Radiology in Relation to Infancy and Childhood"—Dr. A. U. Desjardins, Mayo Clinic, Rochester.
3. "Congenital Heart Disease with Reports of Cases"—Dr. W. J. Wilson, Detroit.
4. "Behavior Problems in Children"—Dr. Barnes, Department of Pediatrics, Ann Arbor.
5. Reserved for Pediatrics Department, Ann Arbor.

Ophthalmology and Otolaryngology

Chairman: WILFRID HAUGHEY, Battle Creek

Secretary: H. O. WESTERVELT, Benton Harbor

Wednesday, September 14—9:30 A. M.

1. Chairman's Remarks. Dr. Wilfrid Haughey, Battle Creek.
2. "Prevention and Non-Surgical Treatment of Cataracts"—Dr. Alfred Dean, Grand Rapids.

The ophthalmoscope has been responsible for clearing up many of the early false conceptions of cataract, but it did not correct the etymology of the term. With improved technique and observation, cataracts have received a more definite classification. While it may commonly be considered as a result of senile degeneration, it is more often a secondary

condition, resulting from local or systemic causes which might be prevented by observation of rules of hygiene and sanitation.

The location of the lens, with its source of nutrition and its duties, exposes it to early injury from internal and external causes, so that it may be one of the first tissues to manifest signs of pathology.

The slit-lamp has given us much valuable information that was beyond our reach with the ophthalmoscope, and gives its operator living material to study microscopically, and, as a result, local or systemic effects on the lens tissue are now recognized as producing a more or less characteristic picture.

Prevention is the treatment of choice, but if acquired opacities in the lens do develop, there is more to be offered the patient than a pair of glasses, or a cataract extraction at a later date.

Discussion—Dr. P. T. Grant, Grand Rapids; Dr. H. H. Sanderson, Detroit.

3. "Retinal Lesions Encountered in Cardiovascular Disease"—Dr. George F. Suker, Chicago.

Discussion—Dr. George Slocum, Ann Arbor; Dr. Don M. Campbell, Detroit.

4. "Heterophoria"—Dr. Albert S. Barr, Ann Arbor.

Discussion: Dr. Herbert T. White, Flint, Dr. Raymond J. Sisson, Detroit.

5. Case Reports: "Tenonitis." "Dislocated Lenses." "Foreign Body in the Orbit." "Unilateral Spasm of the Accommodation"—Dr. Alexander R. McKinney, Saginaw.

1. Spontaneous extrusion of a foreign body (piece of cartridge shell), which had passed entirely through globe, lodging in the orbit.

2. Persistent dilatation of the pupil which was finally explained by discovering a very small foreign body in the globe. Extraction with magnet and recovery.

3. Dislocation of hypermature cataractous lens in the vitreous necessitating enucleation.

4. Dislocation of lens into anterior chamber in a high myope. Liquid vitreous. Extraction and recovery.

5. Suppurative Tenonitis, metastatic in origin. Staphylococcus albus. Enucleation with gold ball implant.

Discussion—Dr. R. D. Sleight, Battle Creek; Dr. Wm. Edw. McGarvey, Jackson.

Wednesday, September 14, Dr. Suker will present a reel of Motion Pictures of a new Operation for Glaucoma which in his hands "has been very satisfactory in every detail."

Thursday, September 15, Dr. Lillie will show before our Section a four hundred foot reel of "Cataract Surgery in India" pictures, which he will describe.

LUNCHEON—12:00 M.

Round Table Conference: Dr. George F. Suker, Chicago.

"Ophthalmological Problems of Everyday Practise."

"A New Operation for Glaucoma"—Motion pictures.

QUESTIONS DESIRED DISCUSSED MUST BE WRITTEN AND HANDED IN EARLY FOR DR. SUKER'S CONSIDERATION.

Thursday, September 15—9:30 A. M.

1. Case Presentations and Reports—Dr. Ralph B. Fast, Kalamazoo.

2. "The Differential Diagnosis of Sinus Disease"—Dr. Millard F. Arbuckle, St. Louis, Missouri. Lantern slides.

Discussion—Dr. H. Lee Simpson, Detroit; Dr. Robt. Frazer, Battle Creek.

3. "The Clinical Significance of Retrobulbar Neuritis"—Dr. W. I. Lillie, Rochester, Minnesota. Lantern slides.

Retrobulbar neuritis is a definitely established clinical entity, although the etiology is not always so readily revealed. Any case of retrobulbar neuritis is important enough to warrant a thorough search for any or all causes, inasmuch as it may be a prodromal phase of a serious ailment.

Retrobulbar neuritis may be either acute or chronic, depending upon the case. The chronic type is more readily overlooked both by the patient and the doctor, and is not so amenable to treatment. A large number of the acute type spontaneously get better, and one is apt to credit whatever form of treatment instigated as the curative agent.

The etiology of retrobulbar neuritis as revealed at the Mayo Clinic, and representative case histories of each group, are presented. The type of treatment and the end-results obtained in the different groups are summarized.

Discussion—Dr. Robert G. Laird, Grand Rapids; Dr. John R. Rogers, Grand Rapids.

4. "Certain Rhinologic Aspects of Allergy"—Dr. Warren T. Vaughan, Richmond, Virginia. Lantern slides.

Discussion—Dr. George L. Waldbott, Detroit; Dr. Ferris N. Smith, Grand Rapids.

LUNCHEON—12:00 M.

Round Table Conference: Dr. Millard F. Arbuckle, St. Louis, Mo.

Dr. W. I. Lillie, Rochester, Minn.

"Eye, Ear, Nose and Throat Problems of Everyday Practise."

"Cataract Surgery in India." Motion pictures.

QUESTIONS DESIRED DISCUSSED MUST BE WRITTEN AND HANDED IN EARLY FOR DR. ARBUCKLE'S AND DR. LILLIE'S CONSIDERATION.

Dermatology and Syphilology

Chairman: C. K. VALADE, Detroit.

Secretary: G. H. BELOTE, Ann Arbor

Wednesday, September 14, 1932

9:15 A. M.

Election of Officers.

1. "The Treatment of Malignant and Pre-malignant Dermatoses"—Dr. C. K. Hasley, Detroit.

The various accepted methods of treatment of malignant skin lesions will be discussed. Emphasis will be placed on their response to X-Ray and Radium treatment in hypermassive doses. A portion of the paper will be devoted to the electrocoagulation method of treating malignancies which have received insufficient radiation therapy by underdosage over prolonged intervals of time. The paper will be illustrated with lantern slides.

2. "A Review of the Treatment of Psoriasis by the Low Nitrogenous Diet."—Dr. R. C. Jamieson, Detroit.

A brief mention of the early studies regarding diet in psoriasis, particularly a low nitrogenous intake. The effect of a low nitrogenous diet alone or in combination with other methods of treatment upon the lesions of psoriasis. Results reported. Relation of nitrogen intake to endocrine metabolism—particularly the pituitary. A brief discussion of whether an abnormal nitrogen intake can be only one of the many factors inducing a metabolic change resulting in psoriasis.

3. "The Management of the Treatment of Syphilis in General Practice"—Dr. George Van Rhee, Detroit.

Outline.

1. Introduction.
2. Drugs.
3. Dosage.
4. Patient.
 - A. Preparation.
 - a. Mental.
 - b. Economics.
 - c. Physical.
5. Scheme for Treatment.
 - A. Primary-Secondary.
 - B. Latent.
 - C. Prenatal.
 - D. Congenital.

4. "The Physical Therapy of the Commoner Skin Diseases"—Dr. H. J. Parkhurst, Toledo

The forms of physical therapy of the com-

moner dermatoses, as usually employed by the general practitioner, will be mentioned and evaluated, and statistics from the author's practice will be cited in an attempt to point out the most successful and practical procedure for the treatment of each skin disease.

Wednesday P. M.

Combined meeting of sections.

Thursday, September 15—9:30 A. M.

Presentation and Discussion of a group of Dermatologic cases at the Health Service of the Western State Teachers College. Discussants will attempt to establish diagnoses and point out the most successful forms of therapy.

Clinic in charge of Doctors A. E. West, A. P. Biddle, U. J. Wile, R. C. Jamieson, C. K. Valade, H. L. Keim, H. S. Bartholomew, and Arthur Woodburne.

HOUSE OF DELEGATES

Speaker: Henry J. Pyle, M.D., Grand Rapids.

Vice-Speaker: C. E. Dutchess, M.D., Detroit.

Secretary: F. C. Warnshuis, M.D., Grand Rapids.

First Session

Tuesday, September 13, 1932, 10:00 A. M.

1. Call to Order.
2. Report of Credential Committee.
3. Roll Call.
4. Speaker's Address.
5. President's Address.
6. President-Elect's Address.
7. Council's Annual Report.
8. Appointment of Reference Committees.
 - (a) Council.
 - (b) Society Affairs.
 - (c) Miscellaneous Business.
9. Election of Nominating Committee.
 - (a) To Nominate:
 1. Three Delegates to A.M.A.
 2. Three Alternate Delegates A.M.A.
 3. Place for Annual Meeting.
10. Committee Reports.
 1. Civic and Industrial Relations.
 2. Legislative.
 3. Woman's Auxiliary.

4. Survey of Health Agencies.
5. Radio Committee.
6. Delegates to A.M.A.

11. New Business and Resolutions.

12. Adjournment.

Second Session

2:45 P. M.

1. Call to Order.
2. Report of Credential Committee.
3. Roll Call.
4. Reference Committee Reports.
 - (a) Council.
 - (b) Society Affairs.
 - (c) Miscellaneous Business.
5. Unfinished Business.

AMENDMENT TO CONSTITUTION

ARTICLE III, SECTION I:

In second line, after honorary members, insert the words "Member Emeritus" and add the following new section as Section 6, Article III:

"Section 6: Emeritus Members: Any member in good standing and good repute who has maintained an active county society affiliation for twenty-five years and has attained the age of 70 shall automatically become a member emeritus. Members Emeritus shall hold all the privileges of membership, including the Journal, and shall be relieved of paying the annual dues of this society."

6. New Business and Resolutions.
7. Adjournment.

Third Session

7:45 P. M.

1. Report of Credential Committee.
2. Roll Call.
3. Final Report of Reference Committees.
4. Elections.
 - (a) President-Elect.
 - (b) Report of Nominating Committee.
 1. Three A. M. A. Delegates—Terms Expiring: C. S. Gorsline, H. A. Luce, J. D. Brook.
 2. Three A. M. A. Alternate Delegates—Terms Expiring: C. F. Moll, Henry E. Perry, R. H. Denham.
 - (c) Election of Councilor
 - 7th District: T. F. Heavenrich—Term Expired.
 - 8th District: Julius F. Powers—Term Expired.

9th District: Harlan MacMullen—Term Expired.

10th District: Paul R. Urnston—Term Expired.

(d) Place for Annual Session.

(e) Speaker.

(f) Vice-Speaker.

5. Unfinished Business.

COMMITTEE ON CREDENTIALS

A. A. McNABB, Chairman

C. E. HALSEY

E. J. WITT

A. T. HAFFORD

T. P. TREYNOR

All delegates must obtain approval of their credentials before being seated. The Committee will convene at 9:00 A. M., September 13, at the Presbyterian Church House.

DELEGATES TO ANNUAL MEETING, KALAMAZOO, MICHIGAN*¹

September 13-15, 1932

Alpena County—15

E. L. FOLEY

L. F. Secrist

Barry—12

C. P. LATHROP

H. A. Adrounie

Bay-Arenac-Iosco—61

F. S. BAIRD

L. Fernald Foster

Berrien—38

E. J. WITT

R. E. Reagan

Branch—12

A. G. HOLBROOK

R. L. Wade

Calhoun—105

C. S. GORSLINE

A. T. HAFFORD

W. L. Godfrey

A. D. Sharp

Cass—12

W. C. McCUTCHEON

S. L. Loupee

Chippewa-Mackinac—17

F. C. BANDY

E. H. Webster

Clinton—12

W. B. McWILLIAMS

A. O. Hart

*Delegates names appear in capital letters; alternates in small letters.

¹Numbers opposite County names indicate paid membership.

- Delta—23**
J. W. TOWEY
A. H. Miller
- Dickinson-Iron—19**
- Eaton—18**
A. G. SHEETS
K. A. Anderson
- Genesee—129**
FRANK REEDER
GEORGE CURRY
JACK CONNELL
H. Randall
D. Wright
M. Burnell
- Gogebic—24**
W. E. TEW
A. J. O'Brien
- Grand Traverse-Leelanau—28**
E. F. SLADEK
F. B. Minor
- Gratiot-Isabella-Clare—28**
T. J. CARNEY
W. L. Harrigan
- Hillsdale—19**
BURT F. GREEN
A. E. Martin
- Houghton—40**
W. A. MANTHEI
Alfred La Bine
- Huron—6**
- Ingham—68**
K. B. BRUCKER
L. G. CHRISTIAN
Milton Shaw
C. F. De Vries
- Ionia-Montcalm—33**
W. W. NORRIS
A. J. Bower
- Jackson—64**
PHILIP RILEY
J. J. O'MEARA
G. S. Clarke
H. A. Brown
- Kalamazoo—122**
F. T. ANDREWS
A. A. McNABB
D. C. Rockwell
J. T. Itzen
- Kent—205**
G. H. SOUTHWICK
J. D. BROOK
A. V. WENGER
W. E. WILSON
R. H. DENHAM
A. M. Moll
E. N. Nesbitt
W. A. Hyland
E. W. Schnoor
C. F. Snapp
- Lapeer—16**
H. M. BEST
W. A. Gift
- Lenawee—34**
C. H. WESTGATE
E. C. Raabe
- Livingston—12**
- Luce—10**
H. E. PERRY
E. H. Campbell
- Macomb—32**
J. N. SCHER
G. F. Moore
- Manistee—13**
A. A. McKAY
C. L. Grant
- Marquette-Alger—36**
V. H. VANDEVENTER
L. W. Howe
- Mason—8**
L. W. SWITZER
E. G. Gray
- Mecosta—19**
THOS. P. TREYNOR
Leo Chess
- Menominee—10**
M. E. CHAMPION
S. C. Mason
- Midland—8**
C. V. HIGH, SR.
R. E. Rice
- Monroe—29**
P. D. Amadon
- Muskegon—66**
F. W. GARBER, SR.
C. J. Bloom
- Newaygo—10**
A. C. TOMPSETT
H. R. Moore
- Northern Michigan—29**
WESLEY MAST
F. Riffenberg
- Oakland—78**
C. T. EKELUND
F. A. MERCER
B. M. Mitchell
L. A. Farnham
- Oceana—8**
A. R. HAYTON
J. H. Nicholson
- Otsego-Montmorency, Crawford-Oscoda—**
- Roscommon-Ogemaw—11**
CLAUDE R. KEYPORT
C. G. Clippert
- Ontonagon—5**
E. J. EVANS
F. W. McHugh

Ottawa—28

A. E. STICKLEY
R. H. Nichols

Saginaw—75

A. E. LEITCH
R. M. Kempton

Sanilac—10

J. C. WEBSTER
R. K. Hart

Schoolcraft—5

DONALD ROSS
Valorus F. Lang

Shiawassee—27

I. W. GREENE

St. Clair—41

A. L. CALLERY
T. E. DeGurse

St. Joseph—17

R. A. SPRINGER
J. V. Blood

Tri—22

J. F. GRUBER
W. Joe Smith

Tuscola—24

O. G. JOHNSON
G. H. Kaven

Washtenaw—119

JOHN WESSINGER
THERON LANGFORD
George Muehlig

Wayne—1196

H. W. PLAGGEMEYER
L. J. HIRSCHMAN
FRANK A. KELLY
H. W. YATES
A. H. WHITTAKER
WM. J. STAPLETON, JR.
J. H. ANDRIES
H. A. LUCE
G. C. PENBERTHY
RICHARD McKEAN
C. E. DUTCHESS
L. O. GEIB
E. D. SPALDING
A. P. BIDDLE
J. L. CHESTER
B. U. ESTABROOK
C. E. HASLEY
WM. S. REVENO
J. D. CURTIS
D. P. FOSTER
N. M. ALLEN
S. P. L'ESPERANCE
STANLEY INSLEY
E. C. BAUMGARTEN
C. S. KENNEDY
A. E. Catherwood
L. T. Henderson
C. B. Lakoff
D. I. Sugar

Charles Barone
D. J. Leithauser
L. J. Garipey
Wm. Woodworth
Basil L. Connelly
W. D. Barrett
R. D. McClure
L. Byron Ashley
Walter Hackett
J. C. Kenning
J. R. Rupp
Robert B. Kennedy
C. R. Davis
S. G. Meyers
X. A. Jones
Wm. H. Honor
L. Mae James
Frank Witter
V. L. Van Duzen
E. E. Poos
G. J. Baker

COMMITTEE REPORTS**SURVEY OF MEDICAL SERVICES AND
HEALTH AGENCIES**

In accordance with instructions received from the House of Delegates at the special meeting held at Jackson, your committee has actively undertaken the task of surveying the medical facilities of Michigan. Several meetings of the committee were held and plans for the survey were adopted. Dr. Nathan Sinai, of Ann Arbor, was engaged as Director of Study.

The scope of the survey was fully outlined in the May number of the Journal of the Michigan State Medical Society. Perusal of the study plan will convince you of the magnitude of the task which we have undertaken. Considerable delay in sending out the questionnaires was occasioned by the fact that we had no adequate list of the physicians in active practice. The most recent directory of the A. M. A. was found to be very defective. Hence it became necessary for each county society to appoint a Public Relations Committee to report, as accurately as possible, the physicians in practice. Some of the counties responded very promptly while others have been more delinquent. This work is very difficult in the larger counties, especially Wayne. As soon as the county societies submitted these lists, the questionnaires were sent out. The response has been gratifying and approximately sixty per cent of the doctors in these counties have mailed their schedules.

As the work progressed, it seemed advisable to appoint sub-committees, to report on matters of unusual importance. The following sub-committees are at work:

Crippled Children: Carl E. Badgley, Detroit; G. Curry, Flint.

Child Health: David J. Levy, Detroit; L. Jones, Flint; R. M. Kempton, Saginaw.

Hospitals: E. T. Olsen, Detroit; W. L. Babcock, Detroit; J. T. Hamilton, Detroit.

Industrial: Earl I. Carr, Lansing; T. F. Heavenrich, Port Huron; Grover C. Penberthy, Detroit.

Laboratories: W. M. German, Grand Rapids; N. Larkum, Lansing.

Medical Problems of Colored Population: S. H. C. Owen, Detroit; H. E. Sims, Detroit.

Public Health: I. O. Geib, Detroit; C. A. Neafie, Pontiac.

State Mental Hospitals: O. R. Yoder, Ypsilanti; F. P. Currier, Grand Rapids.

Tuberculosis: H. D. Chadwick, Detroit; W. H. Winchester, Flint.

University Hospital: H. W. Plaggemeyer, Detroit; J. G. R. Manwaring, Flint; J. B. Jackson, Kalamazoo.

Cancer Problems: M. Ballin, Detroit; C. Weller, Ann Arbor.

Venereal Disease Problems: U. Wile, Ann Arbor; R. C. Jamieson, Detroit.

Following the collection and analysis of the special data, these committees will be asked to interpret the results and make recommendations. The final recommendations of your committee will therefore be based, not only upon its own judgment, but upon the judgments of many committees intimately acquainted with special problems in medical service.

The hospital and industrial committees are now reviewing the programs for study in these fields and collection of data will be started very soon. Your committee has been fortunate in obtaining the hearty coöperation of the Michigan Manufacturers Association. This association will distribute the schedules to Michigan manufacturers and will make the necessary arrangements for field studies wherever indicated.

A study of the economic statutes of the population in Michigan is now being made and it is planned to add whatever material is available on the cost of living.

While it is too early to make a definite determination, the income study will be attempted on a county-by-county basis. If data are not available on this basis, then the study will be made by trade areas in Michigan. It is felt that this study will be basic to the final conclusions.

The analysis of the material from the public health study is now being made. It is proposed in this study to show the organic structure of public health in Michigan, as well as its functioning, results, and costs. As a corollary to this study, much data will be secured

to show the activities and costs of medical welfare service.

At the end of the mailing program, a list of physicians who have not made returns will be sent to the public relations committee of each county and they will be asked to estimate the gross incomes, within broad limits, of the physicians who have failed to fill out the schedule. In this way, we shall be able to check the validity of the final figures to determine whether those who failed to make a return are spread more or less evenly throughout the entire group, or are to be found concentrated in one or two income categories.

Your chairman, as well as some members of the committee, has addressed several county societies on the subject of medical economics. The round table discussions at such meetings have demonstrated the interest which our members are showing in this survey. The opinions expressed will be useful in guiding us towards our final conclusions. Your chairman has attended the meetings of the Council and of its Executive Committee during the year in order to keep them acquainted with our progress.

There is an enormous amount of work yet to be done in the compilation of informative facts. We have endeavored to consider every factor related to health or medical care. If we have overlooked anything which you deem to be important, we shall welcome your suggestions. We believe that we have undertaken the most comprehensive survey that has ever been conducted by a state medical society. It is hoped that we will have a background that will give us an accurate picture of medical conditions in Michigan. We are proceeding "without haste and without rest," and ask for your patience and coöperation. We believe that the final report will be completed and published before the annual meeting in 1933.

Respectfully submitted,

W. H. MARSHALL.

CIVIC AND INDUSTRIAL RELATIONS COMMITTEE

The Civic and Industrial Relations Committee held two meetings, one at the Book-Cadillac Hotel in Detroit, December 11, 1931, and one at the Hayes Hotel in Jackson, January 27, 1932.

At the Detroit meeting, the committee passed a resolution as follows: "On every sick and accident claim proof that is made out by a physician, the physician should bill the insurance company involved for \$2.00, as per resolutions adopted in Jackson, September, 1929." This action was taken in order to

emphasize the meaning of the original resolutions and to protect the interests of Michigan physicians until the Bureau of Medical Economics of the American Medical Association makes its report. It is recommended that physicians adhere to the meaning of the resolutions by appending a statement for \$2.00 for services to each report blank filled out, whether it is requested by the claimant or the insurance company.

At the special meeting of the House of Delegates in Jackson on January 27, Dr. R. G. Leland, Director of the Bureau of Medical Economics of the American Medical Association, outlined the progress of the national study of health and accident insurance companies. He stated that, "According to information received from the State Commissioners of Insurance, there appears to be no statute in the insurance department regulation in any state requiring that physicians shall furnish specific information for such claim proofs. Many of the statutes do provide that there shall be due proof of loss, but the interpretation of due proof of loss is left largely to the insurance companies."

Through Dr. Leland's activities, a special committee has been appointed by the International Claim Association, with Mr. Robert K. Metcalf, Manager of the Claim Department of the Connecticut General Life Insurance Company, as chairman. A preliminary report of the Bureau of Medical Economics appears in the Journal of the American Medical Association, April 2, 1932, on page 1171, entitled "Health and Accident Claim Proofs." It is recommended that every member of the Michigan State Medical Society read this report. In a communication from Dr. Leland, May 18, 1932, he promised that a subsequent report would be made on this very important question.

During the year, your chairman has had several conferences with physicians concerning the insurance question, and has carried on considerable correspondence with various insurance companies regarding disputes, which have arisen as a result of the resolutions.

The committee believes that one of the major problems, which greatly affects hospitals, physicians and the public, is the matter of medical care of highway accidents. Preliminary study on this question was begun two years ago, but inasmuch as the Michigan State Hospital Association appointed a committee for study, it was deemed advisable that the medical profession refrain from entering into this activity. As yet, no definite report has come from the hospital association and your committee recommends that this question be

made one of the major functions of the committee during the coming year.

Respectfully submitted,

HARRISON S. COLLISI, M.D., Chairman.

LEGISLATIVE COMMITTEE

The Legislative Committee of the State Medical Society met formally and informally during the year to study the history and present effects of regulations for those treating the sick. We reviewed the laws of many states and we studied the present and future needs for Michigan.

There were many guests at our meetings. There were many conferences with leaders in the professions, with officials in State Government administration, with Legislators and others. The committee acknowledges the great and helpful advice and counsel thus obtained.

The Special Session of the Michigan Legislature gave us opportunity this year for many contacts and especially it was possible for the Special Legislative Commission, created by a Concurrent Resolution, to meet and work. A series of hearings were held by this commission to which representatives of various groups were invited. The chairman of our committee was invited to one of these hearings. He responded and attended in company with two of the committee and five others named by the chairman of the Executive Committee of the Council.

Our position was presented in part by the following:

"If everyone interested or concerned with Medical Practice Acts was continuously mindful that they exist solely for the protection of the public, controversy would cease.

"A Supreme Court opinion under Constitutionality of the Medical Practice Act, in Michigan Compiled Laws, 1929, reads, 'The contention that this Statute interferes with the right of a citizen when ill to employ anybody he chooses as his physician is not supported by authority or reason. The practice of medicine affects the public health and it is clearly within the police power of the State to provide that those dealing with disease shall be amply qualified so far as human experience and education may qualify them.'

"Anyone who attempts to alter or change or to direct opinion leading to a change in our Medical Practice Act, unless he is prompted by selfish motives, must consider only those changes which may better protect the public and not those which may benefit a few, a class or a group.

"Even in this day of general enlightenment, superstitions and great credulity persist in

matters of disease. More than eighty groups or cults are listed today and are taking advantage of these relics of ancient human characteristics. An unsubstantiable promise is often readily accepted and may supersede discouraging opinion offered from a qualified source. Acceptance of the former frequently adds to the distress or shortens life. Hence, there is reason and legal authority in designating qualifications and conduct of those who practice the Healing Art and offer medical advice. Solicitation, subsidy, division of fees and practicing under a false or assumed name have necessarily been made unlawful and subject to penalties for the protection of the public.

"Consideration of Michigan's Medical Practice Act entails the protection of approximately 5,000,000 persons and regulation of the qualifications and conduct of about 6,000 Doctors of Medicine, practicing in houses, offices and 242 hospitals. Without scientific medicine, would not the 50,000 annual death rate and the 100,000 annually reported communicable diseases in Michigan be greater? With better regulation of medical practice would not these figures be reduced?

"Young men are expending annually about \$1,000,000.00 as their personal expenditures in obtaining medical, scientific education in the two medical schools of Michigan and are steadily confined in preparation until they are 25 to 30 years of age, which is half of this generation's average longevity, that is, 56."

Attention was called to many of the occurrences and experiences relating to the Medical Practice Act in Michigan. We continued, "Heretofore political pressure has quite generally activated many legislatures until 1931 when you saw the obligation of impartial initiation of action and created this, your Special Legislative Commission."

We proffered our aid and all resources of the medical profession.

It is our belief that the Special Commission for the Legislature understands the seriousness of their obligation and knows that medical practice acts are for the protection of the public, made credulous by illness, and not for political exchange or patronage.

The results of these activities cannot be measured or estimated until the next and future legislatures meet and act and the job continues.

Signed,

EARL I. CARR, Chairman.
GROVER C. PENBERTHY.
WM. C. MCCUTCHEON.
A. M. HUME.
WM. HYLAND.

RADIO COMMITTEE

The Committee appointed by The House of Delegates met and furnished the various county societies with the following talks:

Some High Spots in Fifty Years of Medical Progress.
Colds and Their Complications.
How Are You?
The Old Medicine Chest.
A Romance of Vaccination.
The Way of the Vegetarian.
The Nature of Cancer.
The Hygiene of the Heart.
Smith in Search of Health.
Appendicitis.
Dangers of Sunlight and Ultra Violet Rays.
Improving the Complexion.
Diphtheria.
Toxoid.
Little Glands with Big Jobs.
Do Your Feet Hurt?
This Matter of Reducing.
Shingles.
Gall Bladder Disease.

Later, this list was added to with the following so that there was material for a weekly talk through the month of June:

Have You a Family Doctor?
Active Exercise Versus Mechanical Vibration.
Convulsions in Infancy and Childhood.
The Reason for Periodic Health Examinations.
What's the Matter with My Nose and Throat?
Teaching Children to Like Wholesome Foods.

Besides the above list numerous other radio talks were given on special occasions by physicians.

Following are the individual reports of the local county medical societies. Benton Harbor was not heard from:

BAY COUNTY MEDICAL SOCIETY

"Through the generosity of the owner, the Hon. James E. Davidson, and Manager Stanley Northcott, we were accorded fifteen minutes a week, for broadcasting over WBCN.

"For the first two and a half months, the time allotted was alternated weekly, from 10:10 to 10:15 A. M. to an evening time of 7:15 to 7:30.

"Talks were given weekly, from January 6 to June 8, a total of 22 broadcasts. These were given by 15 different members of this Society.

"While I know of no one having received any 'fan mail,' there were many favorable comments made by patients to their physicians.

"The project was very well received and the station authorities were very generous to the Society, in according the station's privileges."

L. F. FOSTER, M.D., Secretary.

GENESEE COUNTY MEDICAL SOCIETY

"The only radio talks given were a series of six sponsored by the Genesee County Tuberculosis Society.

"These broadcasts began Thursday, May 5, and ended Thursday, June 9, one being given each week. They were given by members of the local medical society, who talked from six to ten minutes at 7:00 P. M. The subjects were different phases of

the testing of school children, during the Society's campaign towards having all school children taken to their family physician for the Von-Pirquet test for tubereulosis."

C. W. COLWELL, M.D., Secretary.

JACKSON COUNTY MEDICAL SOCIETY

"We began broadcasting health talks over our local station, WIBM, on February 9, 1932. Since that time we have been on the air each Tuesday morning at 10:45 for fifteen minutes. To date we have given nineteen talks. The doctor's name who reads the talk is not announced. This has given rise to some objections on the part of the public as it likes to know who is speaking. However, we have adhered to this policy for fear of creating ill feeling within the Society, to do otherwise. We invite the public to send in subjects which they would like to hear discussed. These, of course, must be of general interest. We have had more requests than we have been able to fill.

"For subject material we have been using the material sent by the State Committee on Radio Education and some sent by Dr. Bauer of the American Medical Association. As the requests have come in we have had to prepare special articles to cover these. I have asked local men to prepare these and submit them to a committee before they were read.

"The local manager is well pleased with the interest shown in our programs and we will continue to be on the air as long as the people want it."

R. H. ALTER, M.D., Secretary.

KENT COUNTY MEDICAL SOCIETY

"Beginning February 25, there has been a broadcast by members of the County Medical Society over WOOD every Thursday at 3:00 P. M. These have included those talks sent out by the state committee, except in April, when there were three talks on Tubereulosis.

"We feel that due to our inability to obtain publicity in local newspapers, the hour of the broadcast, and probably the fact that WOOD programs are not unusually popular, our efforts have been largely wasted. Members of the society have been quite willing to take their turns reading before the microphone.

"Beginning this week (June 21) the hour has been changed to 10:00 A. M., Thursday mornings."

DON B. CAMERON, M.D.
WILLIAM L. BETTISON, M.D.
LEE O. GRANT, M.D.
PAUL W. KNISKERN, M.D.
L. L. FERGUSON, M.D.
Public Health Education
Committee.

WAYNE COUNTY MEDICAL SOCIETY

One hundred thirty-seven radio talks and question-and-answer broadcasts have been presented under the auspices of the Public Education Committee of the Wayne County Medical Society since the creation of the Sub-Committee on Radio, April 1, 1931. The Public Education Committee, under the chairmanship of Dr. Wm. J. Stapleton, Jr., has had a very active thirteen months, resulting in the attainment of definite goals. The Radio Division, under the guidance of Dr. F. H. Cole, Chairman; Drs. W. A. Chipman, M. C. Harvey, W. E. Keane and C. C. McClelland, has surprised the Society with the success it has achieved in its pioneering endeavors.

The Public Education Committee extends thanks to the many coöperating physicians and surgeons for their active help in preparing radio papers and in visiting radio stations at designated hours, which in many cases were not the most convenient for doctors. Such unselfish work has been appreciated not alone by the officers of the Wayne County Medical Society but by the public as well, to judge by its interest and response through the correspondence and over the telephone. The Committee intends to maintain its advantage and to assume full activity in its radio work with the autumn season. During the summer months only a few broadcasts of seasonal importance will be sponsored.

The Committee, and The Council of the Wayne County Medical Society, have entered a vote of thanks on their minutes to Station WWJ and to Station WEXL for their active support of the Society in its program of informing the public via the powerful medium of the radio. The health benefits derived by our people as a result of this coöperative endeavor between the radio stations and the Medical Society are immeasurable. The Society appreciates the altruism of its radio friends in donating so many generous minutes in the interests of better public health.

The lectures and talks since the last published list (on January 5, 1932) were:

Date	Name	Subject	Radio Station
January 5.....	Dr. Wm. J. Stapleton, Jr.....	"Fifty Years of Medical Progress".....	WEXL
January 7.....	Dr. Don Gudakunst.....	"Health of the School Child".....	WEXL
January 12.....	Dr. H. S. Berman.....	"Recurrent Coughs in Children".....	WEXL
January 14.....	Dr. A. R. Bauer.....	"The School Child".....	WEXL
January 19.....	Dr. C. K. Hasley.....	"What Everyone Should Know About Cancer".....	WEXL
January 19.....	Dr. Hugo Freund.....	"Truth and Fiction About Blood Pressure".....	WWJ
January 21.....	Dr. S. K. Beigler.....	"History and Treatment of Infections".....	WEXL
January 26.....	Dr. Ray Hughes.....	"The Nose and Its Neighbors".....	WEXL
January 26.....	Wm. J. Burns.....	"Why a Medical Society?".....	WWJ
January 29.....	Dr. Hayden Palmer.....	"Sinus Disease".....	WEXL
February 2.....	Dr. B. F. Glowacki.....	"The Ear".....	WEXL
February 2.....	Dr. A. S. DeWitt.....	"Heart Burden and Heart Consciousness".....	WWJ
February 4.....	Dr. Don J. Barnes.....	"Nutrition".....	WEXL
February 5.....	Dr. Wm. J. Stapleton, Jr.....	"Music and Medicine".....	WEXL
February 9.....	Dr. Harold Clark.....	"Tonsilitis".....	WEXL
February 12.....	Dr. A. R. Hackett.....	"Sports in Relation to Health".....	WEXL
February 16.....	Dr. Stewart Hamilton.....	"Cost of Hospital Care.".....	WWJ
February 18.....	Wm. J. Burns.....	"Why a Medical Society?".....	WEXL
February 23.....	Dr. S. S. Altshuler.....	"The Normal Diet".....	WEXL
February 23.....	Dr. H. Lee Simpson.....	"Are Our Colds the Result of Modern Heating?".....	WWJ
February 25.....	Dr. M. J. Brady.....	"The Growth and Care of the Baby".....	WEXL
February 26.....	Dr. Harry August.....	.....	WEXL
March 1.....	Dr. W. S. O'Donnell.....	"The Necessity of a Balanced Diet in the Feeding of Children".....	WEXL
March 8.....	Dr. B. F. Glowacki.....	"Madam Curie".....	WEXL
March 10.....	Dr. Frank Perkin.....	"Diabetes Mellitus".....	WEXL
March 15.....	Dr. Dan P. Foster.....	"Glands of Internal Secretions".....	WEXL
March 18.....	Dr. Wm. Fowler.....	"Romance of Anesthesia".....	WEXL

March 22.....	Dr. H. D. Chadwick.....	"History of Tuberculosis and Its Prevention".....	WWJ
March 24.....	Dr. G. R. Barzyk.....	"General Talk on Course and Diagnosis of Tuberculosis".....	WEXL
March 29.....	Dr. Richard Morgan.....	"History and Cause of Tuberculosis".....	WEXL
April 1.....	Dr. S. E. Gould.....	"Hope for the Diabetic".....	WEXL
April 5.....	Dr. E. D. Spalding.....	"The Heart—Its Work and Its Handicaps".....	WEXL
April 5.....	Dr. Bruce Douglas.....	"Diagnosis of Tuberculosis in Children".....	WWJ
April 7.....	Dr. H. S. Willis.....	"Diagnosis and Reaction of Childhood Tuberculosis".....	WEXL
April 12.....	Dr. Frederic Schreiber.....	"Convulsions".....	WEXL
April 19.....	Dr. Morris Marks.....	"Radium Waters".....	WEXL
April 19.....	Dr. Martin Hoffman.....	"Nervousness: Every Day Problems".....	WWJ
April 21.....	Dr. Mont Wickham.....	"Kidney and Bladder Diseases".....	WEXL
April 26.....	Dr. Robert Berman.....	"Effect of Business on Attitudes".....	WEXL
April 29.....	Dr. Leo Bartemeier.....	"Heart Pains and Complications".....	WEXL
May 3.....	Dr. Harry Kirschbaum.....	"Post Natal Care".....	WEXL
May 3.....	Wm. J. Burns.....	"Our Daily Question Box".....	WWJ
May 5.....	Dr. A. H. Whittaker.....	"Accidents and Your Child".....	WEXL
May 12.....	Dr. E. D. MacKenzie.....	"Pneumonia".....	WEXL
May 13.....	Dr. David H. Fink.....	"Rheumatism".....	WEXL
May 17.....	Dr. Sam Levin.....	"Hay Fever, Asthma and Eczema in Children".....	WEXL
May 17.....	Dr. Douglas Donald.....	"Indigestion".....	WWJ
May 19.....	Dr. W. C. C. Cole.....	"Cultivation of the Child's Appetite".....	WEXL
May 20.....	Dr. Leo J. Coll.....	"The Proper Care of Your Eyes".....	WEXL
May 24.....	Wm. J. Burns.....	"Questions We Are Asked".....	WEXL
May 27.....	Dr. L. W. Shaffer.....	"Popular Misconceptions in Dermatology".....	WEXL
May 31.....	Dr. D. L. Drummond.....	"Chronic Arthritis".....	WEXL
June 2.....	Dr. Emil Rothman.....	"Overweight Due to Glandular Defects".....	WEXL
June 7.....	Dr. A. E. Schiller.....	"The Care of Your Skin".....	WEXL
June 9.....	Dr. E. S. Gurdjian.....	"Present Day Menace of Head Injury".....	WEXL
June 10.....	Dr. Claire L. Straith.....	"Plastic Surgery".....	WEXL
June 14.....	Dr. Stanley Insley.....	"Hay Fever".....	WEXL
June 14.....	Dr. Milo J. Brady.....	"The Growth and Care of the Baby".....	WWJ
June 16.....	Dr. Arthur Bloom.....	"X-Ray in Health and Disease".....	WEXL
June 17.....	Dr. W. E. Johnston.....	"Stomach Ache".....	WEXL
June 21.....	Dr. S. G. Meyers.....	"Liver Troubles—Real and Supposed".....	WEXL
June 21.....	Dr. Wm. Fowler.....	"Romance of Anesthesia".....	WWJ
June 23.....	Dr. B. L. Connelly.....	"Cancer".....	WEXL
June 24.....	Dr. Wm. J. Stapleton, Jr.....	"Cleanliness and Health".....	WEXL
June 28.....	Dr. L. J. Garipey.....	"Appendicitis".....	WEXL
June 30.....	Dr. F. B. Peck.....	"Diabetes in Children".....	WEXL
July 5.....	Dr. Dan P. Foster.....	"Pseudo-Medical Superstitions".....	WWJ
July 12.....	Dr. L. O. Geib.....	"The Periodic Health Examination".....	WWJ
July 19.....	Dr. B. F. Glowacki.....	"What Everyone Should Know About the Eyes".....	WWJ

SECOND COUNCILLOR DISTRICT

To the members of the Council and House of Delegates of Michigan State Medical Society; this office submits the following report of the radio broadcasting activities of the second councillor district of the Michigan State Medical Society:

November, 1931, Governor Brucker was in conference with this office, and he informed us that he was deeply concerned and very much interested in the activities of the Michigan State Medical Society.

At this conference, the Governor communicated with the officials of the Michigan State College, and asked that communication be made with this office.

December, the director of the broadcasting station of the Michigan State College conferred with this office and a health education program was arranged which consisted of series of talks. These lectures were sponsored and given by various members of the medical profession of the second Councillor district, and were announced in the catalog of the Michigan State College as a part of the Education Extension Program.

This schedule contained a medical talk on Health Education beginning the second semester of the college year, each Thursday from 3:30 to 4:00 P. M. The first lecture was given by Dr. J. Earl McIntyre on the subject "Some High Spots in Fifty (50) years of Medical Progress" January 9. January 14, Dr. Harry B. Weinburgh talked on "Colds

and Their Complications." January 21, Dr. John G. Rulison talked on "That Matter of Reducing." Dr. Fred L. Seager talked on "The Way of the Vegetarian" on January 28. February 4, Dr. Fred J. Drolett talked on "The Old Medicine Chest." February 11, Dr. Charles P. Doyle talked on "How Are You?" (Periodic Health Examinations). February 18, Dr. Milton Shaw talked on "The War on Heart Disease." February 25, Dr. Dana M. Snell talked on "Dangers of Sunlight and Ultra Violet Rays." March 3, Dr. Frank C. Dunn talked on "The Role of Heredity in Old Age." March 10, Dr. Earl I. Carr talked on "Hernia." March 17, Dr. George F. Bauch talked on "Cancer." March 24, Dr. Karl B. Brucker, talked on "Diseases of the Rectum." April 7, Dr. Harry S. Bartholomew talked on "Poison Ivy." April 14, Dr. C. Ford De Vries, "Significance of Indigestion." April 21, Dr. Elmer G. McConnell, "Care of the Feet." April 28, Dr. Mathew S. Hurth, "Little Glands With Big Jobs." May 5, Dr. Wm. E. McNamara, "The Value of Keeping Employers in Good Health." May 12, Dr. Samuel Osborn, "Constipation." May 19, Dr. Horace L. French, "Contagious Diseases of Childhood." May 26, John F. Sander, M.D., "Immunization."

We closed our radio broadcasting talks on Health Education over Station WKAR at Michigan State College at the close of the college year May 26, 1932.

The reaction to our program was rather

spasmodic. Letters and telegrams from various parts of the State commending us on our work. However as a whole they seemed to be rather few in number and far between. Therefore, we were at a loss to know whether we were accomplishing a great deal of good.

However this office was very much surprised and greatly delighted when during the past week, the director of the broadcasting station WKAR at Michigan State College telephoned us saying that since the close of the college year and the discontinuation of our broadcasts that the inquiries concerning it and the requests for its continuance were constantly becoming more numerous, and that in his opinion the medical talks of the last semester were the most valuable and appreciated of their radio extension service, and asked that the Second Councillor District prepare and sponsor a weekly program for the entire college year over 1932 and 1933.

After some little difficulty and delay the Jackson Broadcasting Station was secured February 2 of this year and the members of the Jackson County Medical Society have been preparing for broadcasting a health education talk each Tuesday morning at 10:45 since that time.

At first the manager was reluctant to donate the time. It was thought this was due to a large part to a fear that the medical men might use it as an advertising medium and criticize other forms of treatment. The operators of which were paying him good money for their time on the air.

However, after a few programs, the manager became very enthusiastic and has promised the use of the station as long as we wish to use it, so long of course the same class of education programs are conducted.

Jackson has been inviting their listeners to mail in subjects which they would like to hear discussed. In this way, more requests are received than they are able to fill.

For subject matter, we have been using that prepared by the State Committee on Radio Broadcasting, some from the American Medical Association, some from the University of Michigan and a considerable number of original papers were prepared by our own members, which were submitted to our committee for censoring before it went upon the air.

In addition to using the above mentioned material, members of the Jackson County Medical Society have given original papers on the following subjects: Appendicitis, Toxoid, Cancer, Shingles, Tuberculosis, Gall Bladder Disease, Diphtheria, Periodic Health Examinations, Erysipelas and Tuberculin. The Jackson Station has observed that their listeners seem more interested in hearing some partic-

ular disease discussed than some general subject like "A Romance of Vaccination."

Most of the requests come from those who are ill and are interested in having their particular ailment discussed.

We also note that the most of our listeners are from the rural districts, or small villages and towns.

Another particular difference in the policy of the broadcasting stations at Michigan State College and Jackson is this: At Jackson the management prefer that no doctor's name be mentioned in broadcasting a talk. WKAR, the Michigan State College Station, refuses to allow a health talk to be broadcasted unless the Doctor talking is introduced by the director, whether he is presenting an original talk or whether some one is pinch-hitting and reading his paper for him. They insist upon the broadcaster being a bona fide medical man and his name announced. Inasmuch as we have the two stations in this district namely: Lansing and Jackson, so far the Ingham County Medical Society has done the entire broadcasting at Michigan State College and the Jackson County Medical Society broadcasting over the Jackson Station.

Hillsdale County having no station has been invited to prepare subjects and participate in both stations at Lansing and Jackson.

This office has found the medical men of this district very loyal and conscientious in giving their time and preparing and presenting their subjects each Thursday afternoon when assigned at Michigan State College and I believe the same condition exists on Tuesday morning in Jackson.

So far I have heard of no necessity for pinch-hitting.

The above report is respectfully submitted for your consideration.

(Signed).

J. EARL MCINTYRE, M.D.
Councillor, Second District.

ADVISORY COMMITTEE

To the House of Delegates:

The Advisory Committee of the Women's Auxiliary reports that there have been no meetings of this Board held this year.

We have had no request for aid or action from the Women's Auxiliary, therefore there has been no need for any meeting of this committee.

Due to the extremely capable handling of this organization by its president, Mrs. McIntyre, they have functioned in splendid style and are demonstrating that the Female of the Species are efficient.

The committee wishes to take this opportu-

nity to express appreciation, in behalf of the State Medical Society, for what this organization has accomplished.

Respectfully submitted,

THEO. F. HEAVENRICH, Chairman.
FRED C. WARNSHUIS.
LOUIS J. HIRSCHMAN.

COUNCIL

Chairman: B. R. Corbus, Grand Rapids.
Vice-Chairman: Henry Cook, Flint.
Secretary: F. C. Warnshuis.

SESSIONS

September 12, 1932—8:00 P. M.

Burdick Hotel

Subsequent sessions will be held at the call of the Chairman.

COUNCILOR DISTRICTS

First District.—Wayne.
Second District.—Hillsdale, Ingham, Jackson
Third District.—Branch, Calhoun, Eaton, St. Joseph
Fourth District.—Allegan-Kalamazoo-Van Buren, Berrien, Cass
Fifth District.—Barry, Ionia-Montcalm, Kent, Ottawa
Sixth District.—Clinton, Genesee, Shiawassee
Seventh District.—Huron, Lapeer, Sanilac, St. Clair
Eighth District.—Griiot-Isabelle-Claire, Midland, Saginaw, Tuscola, and Cladwin unattached
Ninth District.—Grand Traverse-Leelanau, Manistee, Benzie, Tri (Kalkaska, Missaukee, Wexford)
Tenth District.—Bay-Arenac-Iosco, O. M. C. O. R. O. (Otsego, Montmorency, Crawford, Oscola, Roscommon and Ogemaw combined)
Eleventh District.—Mason, Mecosta, Muskegon, Oceana, Newaygo, Osceola-Lake
Twelfth District.—Chippewa-Mackinac, Delta, Dickinson-Iron, Gogebic, Hought-Baraga-Keweenaw, Luce, Ontonagon, Marquette-Alger, Menominee, Schoolcraft
Thirteenth District.—Alpena-Alcona, Northern Michigan (including Antrim, Charlevoix, Cheboygan, Emmet, Presque Isle
Fourteenth District.—Livingston, Lenawee, Monroe, Washtenaw
Fifteenth District.—Macomb, Oakland

COUNCILORS

	Term Expires
HENRY R. CARSTENS.....1st District A	Detroit .....1935
A. S. BRUNK.....1st District B	Detroit .....1935
J. E. MCINTYRE.....2nd District	Lansing .....1935
GEORGE C. HAFFORD.....3rd District	Albion .....1935
C. E. BOYS.....4th District	Kalamazoo .....1936
B. R. CORBUS.....5th District	Grand Rapids.....1936
HENRY COOK.....6th District	Flint .....1936
T. F. HEAVENRICH.....7th District	Port Huron.....1932
JULIUS POWERS.....8th District	Saginaw .....1932
HARLAN MACMULLEN.....9th District	Manistee .....1932
PAUL R. URMSTON.....10th District	Bay City.....1932
GEORGE LEFEVRE.....11th District	Muskegon .....1933
RICHARD BURKE.....12th District	Palmer .....1933
B. H. VAN LEUVEN.....13th District	Petoskey .....1934
J. D. BRUCE.....14th District	Ann Arbor .....1934
C. A. NEAFIE.....15th District	Pontiac .....1935

Annual Program Woman's Auxiliary Michigan State Medical Society Kalamazoo

September 13-15, 1932

President: Mrs. J. Earl McIntyre, Lansing.
Secretary: Mrs. W. E. McNamara, Lansing.

Headquarters: Burdick Hotel.

Tuesday, September 13

Coöperative Dinner at Home of Mrs. R. A. Morter, Oakland Drive.

Wednesday, September 14

10:00 A.M. President's Conference.

1:00 P.M. Luncheon—Kalamazoo Country Club.

Short Addresses:

Carl F. Moll, Flint, President State Medical Society.

J. Milton Robb, Detroit, President-Elect Michigan State Medical Society.

"Auxiliary Objectives and Opportunities," Frederick C. Warnshuis, Secretary, Michigan State Medical Society.

3:00 P.M. Annual Business Meeting.

Committee Reports.

Election of Officers.

Thursday, September 15

10:00 A.M. Visit to Parchment Paper Company.

2:00 P.M. Visit to Upjohn Pharmaceutical Company.

NOTE: Members and visiting ladies are requested to register at the Information Desk, Burdick Hotel.

Drives around the city are planned for members not attending other meetings.

General Arrangements Committee: Chairman, Mrs. R. A. Morter, Mrs. John McGregor, Mrs. William Shackleton, Mrs. R. J. Hubbell, and Mrs. Walter den Bleyker.

OAKLAND COUNTY—PONTIAC, MICHIGAN

President.....Mrs. Robert H. Baker, 57 Cherokee
Vice President
Mrs. Palmer E. Sutton, 1138 York, Huntington Woods
Secretary-Treasurer.....Mrs. Hubert M. Heitsch, 549 Perry St.

INGHAM COUNTY—LANSING, MICHIGAN

President.....Mrs. H. S. Bartholomew, 902 W. Michigan Ave.
Vice President.....Mrs. P. C. Strauss, 1518 W. Michigan Ave.
Sec'y-Treas.....Mrs. T. P. Vander Zalm, 112 S. Jenison Ave.

JACKSON COUNTY—JACKSON, MICHIGAN

President.....Mrs. George Seybold
Vice President.....Mrs. Walter Finton
Secretary.....Mrs. Miar McGoffin
Treasurer.....Mrs. Ennis Corley, 1009 Third St.



MRS. J. EARL MCINTYRE
President Women's
Auxiliary



MRS. W. E. McNAMARA
Secretary Women's
Auxiliary



DR. CAROLINE BARTLETT
CRANE
Auxiliary Director

SAGINAW COUNTY—SAGINAW, MICHIGAN

President.....Mrs. S. A. Sheldon, 2 Holland Court
Secretary.....Mrs. D. H. Swengel, 901 Emerson St.
Treasurer.....Mrs. W. K. Slack, 5 Jefferson Court

BAY CITY COUNTY—BAY CITY, MICHIGAN

President.....Mrs. C. A. Stewart
First Vice President.....Mrs. H. P. Lawrence
Second Vice President.....Mrs. E. A. Wittner
Secretary.....Mrs. Ray Perkins
Treasurer.....Mrs. H. M. Gale, 517 N. Van Buren St.
Corresponding Secretary.....Mrs. Charles M. Swantek

KALAMAZOO—KALAMAZOO, MICHIGAN

President.....Mrs. Walter Den Bleyker, 513 S. Burdick St.
First Vice President.....Mrs. W. O. Jennings, 442 Stuart Ave.
Second Vice President.....Mrs. I. W. Brown, 2335 S. Rose St.
Secretary-Treasurer.....Mrs. Frederick M. Doyle, 1219 Maple St.

CALHOUN COUNTY—BATTLE CREEK

President.....Mrs. R. C. Stone, 120 Garrison Ave.
First Vice President.....Mrs. M. J. Capron, 102 Ann Ave.
Second Vice Pres.....Mrs. Theo. Kolvoord, 137 Frelinghuysen
Secretary.....Mrs. G. W. Brainard, 204 Chestnut
Treasurer.....Mrs. B. G. Holtom, 94 Central

WAYNE COUNTY—DETROIT, MICHIGAN

President.....Mrs. R. E. Loucks, 337 W. Grand Blvd.
Vice President.....Mrs. Claire Straith, 19305 Berkley Road
Recording Sec'y.....Mrs. Zina Bennett, 4909 Buckingham Ave.
Corresponding Sec'y.....Mrs. L. O. Geib, 3860 St. Clair Ave.
Treasurer.....Mrs. William Rieman, 7919 Kercheval Ave.
Custodian.....Mrs. L. T. Henderson, 713 University Place

The foregoing generalizes the program of the Sixth Annual Meeting of the Auxiliary. A cordial invitation is extended to every doctor's wife or daughter to attend this annual meeting whether a member or not.

The officers are very desirous to have you present, to learn what is being accomplished to arouse your interest with the hope that on returning home you will aid in furthering our plans in your own community.

While your "Doctor Man" is attending the meetings of the State Medical Society join the Auxiliary for profit, new friends and entertainment. You will be pleasantly pleased and you will value these new friendly contacts. We bid you a cordial welcome.

Be sure and register on arrival, receive a badge and join our congenial group.

MRS. J. EARL MCINTYRE,
President.

ENTERTAINMENT

1. Cards to Country Clubs may be secured at the registration desk.
2. Inquire at information booth for program of Auxiliary meetings.
3. Ladies will register and receive badge at Auxiliary headquarters in the Burdick Hotel.
4. Request "Parking Tag" for your car when you register.
5. Reserved seats for all wearing badges will be held till 7:40 p. m., in main section of the civic auditorium and high school auditorium.
6. The following local committees will be happy to aid you and make your stay pleasant:

LOCAL COMMITTEES—ANNUAL
MEETING—KALAMAZOO

Entertainment

Dr. John MacGregor, Chairman

Registration

Dr. John Koestner, Chairman

Hotels

Dr. W. G. Hoebeke, Chairman

History

Dr. Ralph Shook, Chairman

Auxiliary

Dr. Sherman E. Andrews, Chairman

Finance

Dr. C. E. Bennett, Chairman

Garages and Parking Spaces

Dr. Kenneth Crawford, Chairman

Commercial Exhibits

Dr. Hugo Aach, Chairman

Scientific Exhibits

Dr. Hazel Prentice, Chairman

Medicine.....Dr. Stewart
 Surgery.....Dr. Shackelton
 Gynecology and Obstetrics.....Dr. Boys
 Dermatology.....Dr. West
 Ophthalmology and Otolaryngology
 Dr. Fast and Dr. Fulkerson
 Pediatrics.....Dr. Collins

COMMERCIAL AND SCIENTIFIC EXHIBITS

These will be found on the first floor of the Church House. Members are urged to plan to spend a few hours to visit these exhibits. Patronize these business firms by at least a visit to their booths.

Scientific:

Facial Reconstruction: Claire L. Straith, M.D.
 Pathology: James E. Davis, M.D.
 Biological: R. Kahn, Ph.D.
 Hip Tuberculosis: Vernon Hart, M.D.
 Congenital Tuberculosis: George Sewell, M.D.
 Thoracic Surgery: Wm. A. Hudson, M.D.
 Bronson Hospital:
 [And others]

Commercial:

Petrolagar Laboratories.
 Medical Protective Co.
 Professional Underwriters.
 S. M. A. Company.
 Kellogg Food Co.
 Mead-Johnson.
 Columbus Pharmacal Co.
 Gerber's Foods.
 Kuhlman Instruments and Supplies.
 G. A. Ingram Co., Surgical Supplies.
 Upjohn Pharmaceutical Co.
 Hacks Orthopedic Shoes.
 Kellogg Foundation.

NOTES

1. The Kalamazoo Academy will tender a buffet supper, Tuesday evening, 10:00 P. M., at the Kalamazoo Country Club.
2. Speakers have been provided for the Wednesday and Thursday Luncheon Clubs of Kalamazoo.
3. Section Chairmen will insist on strict observance of program placement. Papers will be presented at the time and in the order in which they are listed.

*The Kalamazoo Profession Bids You Welcome.
 You Are Urged to Accept Their Invitation*

THE JOURNAL

OF THE

Michigan State Medical Society

PUBLICATION COMMITTEE

J. D. BRUCE, M.D., Chairman.....Ann Arbor

A. S. BRUNK, M.D.....Detroit

B. H. VAN LEUVEN, M.D.....Petoskey

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Grand Rapids, Michigan

All communications relative to exchanges, books for review, manuscripts, should be addressed to J. H. Dempster, M.D., 641 David Whitney Bldg., Detroit, Michigan.

Reprints of papers published will be furnished authors at cost if the order is placed at the time the galley proofs are returned to the editor. *The cost of illustrations is to be defrayed by the author of the paper whether reprints are ordered or not.*

Contributors are responsible for all statements, conclusions and methods in presenting their subjects. Their views may or may not be in agreement with those of the editor. The aim, however, is to allow authors as great latitude as the general policy of The Journal and the demands on its space may permit. The right to reduce in length or to reject any article is reserved. Articles are accepted for publication on condition that they are contributed solely to this Journal.

All communications regarding advertising and subscriptions should be addressed to F. C. Warnshuis, M.D., 2642 University Avenue, St. Paul, Minnesota, or Suite 1508 Grand Rapids National Bank Bldg., Grand Rapids, Michigan.

SEPTEMBER, 1932

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon

EDITORIAL

112TH ANNUAL MEETING

In the August number of this Journal appeared the preliminary program of the 112th annual meeting of the Michigan State Medical Society to be held in Kalamazoo on September 13, 14 and 15. The complete program will be found in this number of the Journal. It will be seen that those having it in charge have put forth their best

effort to make this program equal if not better than those of former years. One of the ways in which as physicians we may meet the exigencies of the times is better prepara-



DR. CARL F. MOLL
President, Michigan State Medical Society

tion for the work before us. The annual meetings of the State Medical Society are virtually post-graduate courses in medicine, surgery and allied specialties. These papers presented will of course appear in future numbers of this Journal. The discussions, however, will not appear, so in order to get the reaction to the work of the various contributors it is necessary to be present to take part. The annual meetings of the Society afford an opportunity for personal contact with other members, which has an intangible though real social value.

Kalamazoo is easily accessible from all parts of the State. The local profession are putting forth every effort in the way of en-

tainment of the visiting members of the Michigan State Medical Society. The best appreciation of the guest is to be present to partake of the hospitality of the host.



DR. J. M. ROBB
President-elect, Michigan State Medical Society
(Photo by Felix Portrait Studios)

A CIVIC DUTY

Perhaps there has never been a time when members of the medical profession should be more actively concerned with civic affairs than at present, not only so far as local politics are concerned, but state and national politics as well. It would take almost superhuman wisdom to advise in the matter of voting. However, there is no question but that the men who represent us in government should be of the highest character and vision. It has been said, and with a great deal of truth, that the present depression is largely the result of a moral breakdown, hence the way out rests in the ability and foresight of the people to select men who are strong enough to resist the pleas of organized minorities, even at the risk of sacrificing their chances of being returned to office.

The physicians of the United States possess advantages in the way of education and an independence which is born of the fact that each (true in the vast majority of in-

stances) is engaged in an individualistic calling.

There are many things in which the peculiar training of the physician is needed; perhaps the most important is the public health. No organized system of public health can function without one hundred per cent coöperation on the part of the medical profession and this refers particularly to those engaged in general practice. Not only this; there are also problems arising out of the practice of medicine itself. Then there are social and economic problems that call for the influence of men of standing and independence. We have referred frequently to the insidious inroads to state medicine. The practice of medicine by the state, however, is a remote probability when we consider the condition of state treasuries. The danger of socialization of medicine is not so remote. In fact, we have it wherever patients are encouraged to leave the independent practitioner for city clinics or where insurance companies seek to control industrial and other groups. We still feel that the interests of the public are best served when each person is privileged to consult the physician of his own selection and the peculiar personal relation of patient and physician is preserved.

LIVING DANGEROUSLY

From time to time there have appeared editorials in this Journal on the subject of malpractice, urging physicians to protect themselves by membership in the County Medical Society, which also entitles them to defense by the State Medical Society in the event of threatened suit. We have always realized, however, that those who are apt to read editorials are already protected and not in need of any advice along that line, but it seems impossible to reach those who do not consider membership in a medical society worth while. Every now and then cases come up in which doctors have allowed their membership in their county society to lapse and probably have later on resumed membership; but in the interval trouble has arisen. Those who are members of the Michigan State Medical Society might perform a very worthy service by urging any friends outside to join their County Medical Society, if nothing more than for the protection it affords. This, however, is only

one advantage of membership. There are also the professional advantages gained by contact with other members, as well as the opportunity to come in contact with the best medical thought.

We have also touched upon the matter of speaking disparagingly of the results of another doctor's treatment. A doctor's reputation is as much an asset though intangible as any material resource he may possess, and it therefore should not be injured by disparaging word or gesture.

The editing of a Journal such as this calls for a certain precautionary attitude which few recognize apart from the editor himself. We have had occasion to delete expressions and statements in contributed papers which, even though true, if published, would be liable to cause trouble. It is an expensive and uncertain matter to be called into court even to prove that one is right. In the matter of libel, discretion is the better part of valor. Brosnan, the Counsel for the Medical Society for the State of New York, writing in the *New York State Journal of Medicine*, quotes the libel law, which defines libel as, "A malicious publication, by writing, printing, picture, effigy, sign or otherwise than by mere speech, which exposes any living person, or the memory of any person deceased, to hatred, contempt, ridicule or obloquy, or which causes, or tends to cause, any person to be shunned or avoided, or which has a tendency to injure any person, corporation or association of persons, in his or their business or occupation is a libel."

This has been carried so far as to be construed to apply to biographies even of persons long dead, if their descendants felt it worth while to prosecute.

Another matter on which editors must be on their guard is that of violating copyright. If the writer of a paper, for instance, finds it advantageous to make a lengthy quotation, he will do well to write the publisher or author of the article for permission. This is usually granted. However, to quote at length without this permission is violating the law of copyright and one becomes amenable to the penalties of the law should the owner feel it expedient to prosecute. Copyright privileges cover twenty-eight years, so that in quoting from works published beyond this time, mere mention of the source of the material is sufficient. Recent books, however, are very particular in the matter and stipulate that no part of the book may

be quoted without the permission of the publisher. With this permission given it is customary to acknowledge it by a brief line to that effect.

THE WRITING OF MEDICAL PAPERS

No one realizes the danger of commenting on such a subject more than an editor, therefore no effort will be made towards an exhaustive discussion. Perhaps no other person appreciates the pitfalls of composition more than one whose duty it is to read more or less critically the work of others. This experience, however, should entitle one to a respectful hearing by the writer of medical papers.

Writing is a difficult task even for the professional, much more so for the occasional author. Perhaps there is no work which requires more constant study and practice, and the fact that the professional author confesses his difficulties in writing and revising should supply courage to us who appear in print at rare intervals. Oscar Wilde once said that he labored all one forenoon over the removal of a comma, and all the afternoon in reinserting it. The most readable prose is that which has been the object of the most painstaking effort. Sir Clifford Allbutt, whose writings rival those of Sir William Osler, referring to student essays, theses for medical degrees, says, "The student is apt to think that an easy style comes of letting himself go; and that a glaze can be put on by any tiresome pedant. He is unaware that an easy limpid style is the result of consummate craftsmanship." Sheridan has expressed the same idea in a more forceful though less elegant way, "Easy reading makes damned hard writing." Buffon, the naturalist, is said to have rewritten his prose twelve to fourteen times. He was accustomed to have it read to him so that he might note where the reader hesitated, which would indicate additional polishing and the rearranging of punctuation marks.

The writer of a medical paper should realize that style and matter are as intimately associated as flesh and bone. As Carlyle once said, "Language is the flesh garment of thought." This fact calls for a discriminating use of words. Words to the medical essayist should be as full of significance as

mathematical symbols to the physicist or mathematician. A synonym has been defined as a word identical and co-extensive in sense and usage with another word of the same language. There are few real synonyms in the language. Therefore, there is a word that is better than any other if we can but find it. Mark Twain once said, "The difference between the correct word and the near correct word is the difference between *lightning* and *lightning bug*." The accomplished writer is as much an artist in the use of words as an artist is skilled in draftsmanship and the use of pigments.

Occasional writers, on medical subjects or other, are guilty of the use of what may be called *jargon*. This is an avoidance of direct speech by the use of foggy expressions. "He was conveyed to his place of residence in an intoxicated condition." Compare with, "He was carried home drunk." "Among the beneficent qualities of sleep—its capacity for withdrawing the human consciousness from the contemplation of immediate circumstances may perhaps be accounted not the least remarkable." Cervantes said the same thus: "How excellent a thing is sleep, it wraps a man round like a cloak."

The use of the split infinitive, while not a literary crime, should be avoided. "The doctor is apt to trust to the law of chance rather than *to thoroughly* go into the history of the case and make a careful examination." "His records showed the incidence *to rapidly increase*."

It is not sufficient that a paper be free from errors in grammar; that is taken for granted. The medical writer should aim at a style that is clear and convincing. There are excellent models in the works of such writers as Osler, Allbutt, Oliver Wendell Holmes, Wier Mitchell, to mention only a few.

Medical papers should be brief. There are very few medical journals which can accommodate the lengthy paper. The demand on space is so great that only a few of the excellent papers written can be accepted.

ALCOHOL AS A DISINFECTANT

Many have been accustomed to look upon alcohol as a safe and efficient sterilizing medium either for use on the skin or in the sterilization of instruments. The New England Medical Journal sounds a note of

warning to those who place their faith in this means of destroying bacteria. Examination of freshly prepared bottles of sterilizing solution taken at random from a ward of one of the large Boston hospitals yielded a growth of spore-bearing bacilli, many of which proved to be Welch bacilli. Alcohol in proper concentration has been proven effective in destroying vegetative forms of bacteria but it has been found to have little or no effect upon the spores of bacteria. The New England Journal mentions experiments by Koch as far back as 1881, demonstrating the failure of alcohol or its dilutions to kill anthrax spores after immersion for one hundred and ten days. The anthrax bacilli spores appear to be particularly resistant to any destructive effects of alcohol.

The note of warning, therefore, is that one should not rely upon alcohol for the sterilization of instruments that are introduced into the body in process of operation. The use of sterile bottles and freshly distilled water in making alcoholic mixtures would be a distinct contribution to safeguarding methods. The fact that more harm has not resulted from the use of non-sterile alcohol is doubtless due to the inherent resistance of the tissues of the human body to infection.

ITEMIZED STATEMENTS

Everyone who has practised medicine for any length of time has met with the demand from patients for itemized statements after the usual monthly bill has been sent showing the amount only of the indebtedness. An itemized bill has the merit of forestalling any complaint on that score. The editor of the Wayne County Medical Bulletin comes forward with a suggestion that is worthy the consideration of all.

"Bills that are not itemized often create resentment in the minds of patients and frequently raise the question as to the validity of the charges made for services. These two factors mitigate against prompt payment of the account in question and are responsible in no small measure for disagreements between patient and doctor.

"The average debtor is interested in having placed before him an itemized account so that he may have the opportunity not only of checking the individual items for which he is being charged, but of adding the sums involved to make sure that no mistake has been made. Since he is the one who is asked to foot the bill, he feels that he has the right to know just what items he is charged with and how much he is paying for each of them. On receiving a bill which denies him this privilege his first reaction is to delay payment until the explanation that he feels is

his due has been made. Almost invariably, a lump sum looks bigger than the same figure arrived at by the addition of a number of smaller charges and is likely to create an undesirable impression of exorbitance.

"The common practice among doctors to send out itemized statements may be responsible for the feeling that doctors' bills come high, and may be one of the reasons behind the general tardiness in the payment of those bills.

"Those physicians who have changed to the more businesslike method of itemizing their accounts report a decrease in disagreements with patients, and a gratifying increase in collections.

"There is no good reason why the medical profession should not adopt, for the business side of its practice, those tried methods which business in general has found valuable. If so simple a procedure as itemizing our bills promises to eliminate dissatisfaction and speed up payment, then by all means let us all adopt the method and put it into use at once."

LET US MEET AT KAL'MAZOO

We're noo tae hae a meetin' o' th Dōctors o' th State,
An' many men frae many toons, are doon upon th' slate
Tae gi' us information 'boot th' things they like tae do.
They'll tell us a' aboot it, while doon in Kal'mazoo.

There's a lot o' talk o' cancer, th' curse wha's nation-wide,
They're workin' nichts an' Sundays, they're high upon th' tide.
These men are mighty earnest in th' work they hae tae do.
They'll tell us a' aboot it, while doon in Kal'mazoo.

Pneumonia an' consumption hae cut an aw'fu' swarth,
An' heart disease is at th' stake, th' ficht is back an' forth,
But Dōctors o' th' country are secin' th' battle through.
They'll tell us a' aboot it, while doon in Kal'mazoo.

They've fought th' mighty fever, diphtheria an' sma' pox,
Th' plague an' childbed fever are noo upon th' rocks.
But yet there's death an' sickness, mair muckle than is due,
Sae gi'es a haund tae help us, whiles doon in Kal'mazoo.

Guid nicht.
—Weelum.

STRICTURE OF UTERINE CERVIX

ARTHUR H. CURTIS, Chicago, believes that stricture of the uterine cervix is of sufficiently frequent occurrence to warrant the interest of every one concerned with pelvic diseases in women. Important symptoms are persistent leukorrhea, dysmenorrhea, the passage of tarry menstrual blood, and pelvic discomfort of varied intensity. Any one or all of these symptoms may be wanting. The pathologic changes include every conceivable variety of strictural obstruction. Dilatation and pocketing of the canal are frequent. Retention of mucoid secretion or tarry blood sometimes produces serious lesions of the upper genital tract and pelvic peritoneum. Stric-

tures may usually be diagnosed by intracervical palpation with Hegar dilators of small caliber. They are often easily demonstrable and readily overcome. At other times the diagnosis is difficult, anesthesia being required not only to reveal whether a stricture is apparent or real but also, when a stricture is present, to determine its nature and the extent of the complicating pathologic changes. The treatment of stricture of the cervix follows well recognized surgical principles. Dilation may suffice; amputation of the cervix is often necessary, and vaginal hysterectomy is occasionally indicated in selected cases.—*Journal A. M. A.*

VITAMIN C ISOLATED

Some months ago it was reported that a Pittsburgh chemist had been successful in isolating Vitamin C. The discovery had the effect of evoking the following protest from the poet of the Manchester Guardian.

O why should they isolate Vitamin C
As if it were something unclean?
I always imagined such buglets to be
The essence of health and hygiene.
So why the pursuit of this promising pup,
This bright dietetic adorning,
In terms so suggestive of rounding it up
And making it stand in the corner?

The word is too *gauche* and ungracious; it ain't
Polite to use phrases that tend
To indicate quite an unpleasant complaint
Instead of a pal and a friend;
So don't let us "isolate" Vitamin C,
Whose aim is to comfort and nourish—
He ought to be wholly unfettered and free
To multiply vastly and flourish.

O were it not wiser and fairer by far
To round up the viruses bold,
Beginning with him who produces catarrh—
The bug of that foul "common cold"?
By all means detach him and put him away
'Mid wide and deserved execrations—
While virtuous vitamins gambol and play
At large with their friends and relations.

OBITUARY

DR. J. W. HARRISON

Following a collapse while playing golf at Oakland Hills Country Club, Dr. J. W. Harrison, of 926 Balfour Road, Grosse Pointe Park, died August 17th at St. Joseph's Mercy Hospital, Pontiac. Born sixty years ago at Owen Sound, Ontario, Dr. Harrison came to Detroit more than thirty years ago and began his practice after graduating from the Detroit College of Medicine. He was a member of the Detroit Athletic Club, the Lochmoor Golf and Country Club, the Detroit Yacht Club and the Palestine Masonic Society. Professional affiliations included memberships in the Wayne County Medical Society, the Michigan State Medical Society and the American Medical Association. For many years he served as a physician for the *Detroit News*. The widow, Mrs. Ella M. Harrison, and a son, Dr. J. Wilford Harrison, a dentist, survive.

CONTRACEPTION

Dr. George L. LeFevre, Councillor of the 11th District, advises caution in the matter of the adoption of definite policy on the subject by the medical profession of the State.

During the past year there has been active throughout our state an organization of lay people the purpose of which is to spread information concerning birth control. The movement has now progressed to the point where this organization wishes the approval of the Michigan State Medical Society, and this matter has been discussed by the council of that society. Inasmuch as our attention has been called to this problem, I wish to make my position thereon clear.

The council of our society represents the three thousand or more physicians practicing throughout the state, all with varying ideas, desires, and beliefs. Any statement of policy on the part of the council is far reaching in its effect. Great care must be exercised by that body in placing its stamp of approval or disapproval on any movement. This is an age of fads, and it is most difficult to select from the huge list of fads those ideas which may bring about constructive changes. Only time will mark each as a success or a failure. To preserve the dignity of our organization we must be careful which of these we approve and which we veto. A very serious precedent might be established, from which we could withdraw only with difficulty, by incomplete consideration of any of these problems.

The practice of contraception, as far as our state organization is concerned, is not a religious problem. It is true that many religious organizations have for years disapproved of it. That is their concern and it is not the duty of the council to dictate the religious leanings of its members. This problem is a moral one. There is a definite moral angle which we, as physicians, must consider. The dissemination of information concerning contraception by lay organizations will of necessity lack adequate control. Such information will get to many who should not have it. I am thinking of the young unmarried girls of the danger age, between sixteen and twenty, who, because of fear of the consequences, are now living decent lives. If that fear is removed, one of the greatest forces for control of morals will be destroyed.

There have been many organizations of this character active in England during the

past few years, and now the authorities are becoming alarmed because of the falling birth rate. They have found that the increase in population during the last decade was no more than for the decade preceding, during which the world war was fought. Also the increase in births over deaths has declined from twelve per 1,000 in 1900 to three per 1,000 in 1929. With the population thus rapidly becoming stationary and that of her enemies increasing more rapidly, they naturally have cause for alarm.

The United States has a like problem to face. The birth rate here is also falling slowly, having dropped from 18.9 to 17.8 in the past year. This loss is made up by immigration, which means that our vacant land is being populated, not by our own stock, but by alien material. The effect of this reduction in birth rate is a very serious national problem.

In recent years free clinics of all kinds have sprung up everywhere: pre-natal, pre-school, baby, crippled children, and venereal clinics, all of which tend to reduce the number seeking medical advice from their family physician. Most of them have been instituted by non-medical organizations and have neither the backing nor the coöperation of the medical profession. The council cannot in justice to the membership of the society foster these clinics, and should, for that reason, withhold its support from this, another movement for a free clinic. There may be couples, who, because of disease or other reasons, should or might practice contraception, but the decision as to which cases should and which should not, rests only with the family physician and it is to him they should go, not to a free clinic.

GEORGE L. LEFEVRE, M.D., F.A.C.S.

ABERRANT THYROID

Richard B. Cattell, Boston, reviews thirteen cases of lateral aberrant thyroid. All showed a similar structure of papillary cystadenoma. In considering this group of cervical tumors, the author points out the low grade of malignancy as compared with other epithelial tumors involving the cervical glands. These tumors frequently go unrecognized and may be reported as metastatic carcinoma of unknown origin in the cervical glands. It is believed that neck tumors, outside of the thyroid gland showing papillary cystadenoma, are of lateral aberrant thyroid origin and are the result of arrested development. Satisfactory results were obtained by radical removal followed by post-operative irradiation. It is important to recognize them, since a good prognosis can be given.—*Journal A. M. A.*

ONE HUNDRED YEARS OF MEDICAL PRACTICE IN OAKLAND COUNTY VILLAGE

The village of Milford has celebrated its one hundredth birthday. The Journal hastens to extend its congratulations. Dr. C. A. Neafie, Director of Public Health of Pontiac, has taken occasion to compile the medical history of Milford during the past century. The following is Dr. Neafie's account of this section of Oakland County. A year ago, it will be remembered, the Oakland County Medical Society celebrated its 100th anniversary. Dr. Neafie is Councillor for the Fifteenth District of the Michigan State Medical Society.

On the occasion of the Milford Centennial it is but fitting that we pay our humble tribute to that splendid group of pioneer medical men who not only took care of the sick, but also participated in the educational, commercial and civic development of the village during its early years.

The practice of medicine in pioneer days was carried on under great difficulties and the doctor's life was one of many hardships and privations. His patients were widely scattered about the country, necessitating long rides over the Indian trails, along the course of the streams, or over newly laid out roads which were always rough and, in stormy weather, often impassable. He made his way about the country on horseback, his saddlebags containing such instruments and drugs as he would have occasion to use. He would often be away from home for days at a time, particularly during the "sickly" season between June and October, when it was the rule for almost everyone to suffer from the "ague" or what we now know as malaria.

The pioneer physician owed much to his faithful, well-trained horse, who, day and night, carried him on his errands of mercy, often going without food while serving as food for the myriads of flies and mosquitoes which were so prevalent in pioneer days.

It is certain that the early practitioners of Milford were men capable of carrying on their work, in the care and relief of the sick, with every available means and influence. Many of these physicians were graduates of eastern medical colleges, some of European institutions, while others who did not have the advantage of a collegiate education had served a long and active apprenticeship under a preceptor. All had to earn the right to practice by passing a rigid examination given by the Board of Censors of the Territorial or State Medical Society or that by a similar board of the Oakland County Medical Society.

They were the educated men of the village and therefore the influential citizens.

As family physician they sustained with their patients the relation of counsellor and friend.

It has been said that the pioneer doctor was generally present at all the important family events: "He was present at every birth, he sat with the minister by every deathbed, and his signature was affixed as a witness to every will."

The first physician to locate at Milford was Dr. Henry King Foote (1803-1863), a native of East Haddam, Conn. He studied medicine in Vermont and at Albany, N. Y. He began the practice of medicine in Conesus, N. Y., where he remained until 1834, when he came to the territory of Michigan. He was licensed to practice in Michigan territory by the Oakland County Medical Society, of which organization he was an active member. He first settled on a farm in Commerce township near the present village of Wixom. In the spring of 1837 he located in the prospective village of Milford. For many years he was a leader in the development of the community, and served several terms in the leg-

islature. In 1862 he enlisted in the Union army and was commissioned a lieutenant in the Fifth Michigan Cavalry, later being commissioned surgeon of this organization. He died from pneumonia at Poolesville, Maryland, February 8, 1863.

Dr. Daniel Arms (1787-1840) was born in Brattleboro, Vermont. In 1834 with his family, he came to Michigan from Penfield, Monroe county, New York. He first located at Northville, where Mrs. Arms' brother, Dr. David Gregory, had settled in 1833, and was practicing his profession. His sons, Ansley S. Arms and William A. Arms, located at Milford in 1836, the doctor and his family following sometime later. He lived but a short time in the pioneer village, his death occurring in 1840.

Dr. Daniel A. B. C. Fox (1798-1840), who was often spoken of as "Alphabet" Fox, was born in New Hampshire. "Being the seventh son and no intervening daughter, according to the usually accepted maxim, he must be a doctor, and accordingly was educated for that profession." After practicing for some years in the east, he came to Michigan, arriving in Detroit July 4, 1838. The doctor decided to locate in the promising village of Milford and here the family settled. He was licensed to practice by the Oakland County Medical Society and held membership in that society. The toils, privations and constant cares attendant upon his profession proved too much for the doctor and he succumbed to illness. He died in 1840, leaving a widow and eight children, among them being Truman B. Fox, who established the Rochester "Era" and whose son, W. A. Fox, is the present publisher.

Dr. Zebina Montague Mowry (1804-1874), was a native of Cheshire, Mass., the son of Elisha and Barbara Barker Mowry. He graduated from the Berkshire Medical College, Pittsfield, Mass., in 1827. He began the practice of medicine at Madison, N. Y. In 1838 he came to Michigan, locating on a farm in the vicinity of Ann Arbor. In 1841 he removed to Milford and entered into partnership with Dr. Henry K. Foote, an association that continued up to the date of the latter's enlistment in the army in 1862. Dr. Mowry served his township on the Board of Supervisors in 1845 and 1846, and was chairman during the latter year. In 1847 and 1849 he represented his district in the State Legislature, and in 1850 was a member of the Constitutional Convention. He was a member of the Oakland County Medical Society and of the Union Medical Society of Wayne, Washtenaw and Oakland Counties. In May, 1866, he became associated in practice with Dr. Robert Johnston, continuing the arrangement until June, 1873, when failing health necessitated his withdrawal. His sudden death occurred in August, 1874. He showed distinguished ability as a physician, was highly esteemed as a citizen, and during his thirty-three years of residence in Milford rendered exception service to the community.

Another early physician in this locality was Dr. Barnabas Holmes (1780-1844), who came from St. Lawrence County, New York. He was licensed to practice medicine by the Medical Society of the Territory of Michigan July 26, 1830. But little information is available concerning him. He is buried in the Milford cemetery.

Dr. David S. Martin was the pioneer homeopathic physician in Milford, locating in this village in 1845. In 1875 he exchanged his property in the village for a farm in White Lake, but within a short time removed to California.

Dr. Alexander Bryce was practicing in Milford about 1849.

Dr. Robert Browne, a native of Stranorlar, Ireland, graduated in medicine from the University of Glasgow, Scotland. He located at Milford in 1849 and practiced for several years. Later he removed

to Grand Ledge, where he died sometime in the seventies. He was a brother of Dr. Joseph Browne.

Dr. Joseph Browne (1803-1877) was born at Stranorlar, Ireland, the son of Samuel Browne. He was educated in the University of Glasgow, Scotland, and for over twenty years served as a surgeon in the British navy. Later he served in the United States navy in a similar capacity. In July, 1850, he established his home in Milford, where he passed the remainder of his long and useful life, a distinguished member of his profession and a man of high intellectual attainments. He was a brother of Miss Frances Browne, the famous blind poet of England.

Dr. Robert Johnston (1838-1904) was born in Washington county, Pennsylvania. In 1842 the family moved to Ralls county, Missouri. He attended the local schools and when eighteen years of age began teaching school and at the same reading medicine at Madisonville, Missouri. He later entered the University of Iowa, but when the war broke out he enlisted in the Fifth Missouri Infantry. After six months he was honorably discharged and entered the Ohio Medical College at Cincinnati, where he graduated on July 3, 1862. He at once re-entered the Union service and was soon appointed assistant surgeon of the 100th Ohio Volunteer Infantry and early in September began field service. He was in many of the battles in Kentucky, Tennessee and Georgia. He was captured at the battle of Limestone Bridge and sent to Libby prison, where he was confined for two months. Upon his release he rejoined the 100th Ohio, serving until mustered out at Cleveland at the close of the war, July 31, 1865. He continued the study of medicine and surgery at the Bellevue Hospital Medical College, New York, where he graduated in 1866. The same year he located at Milford, entering into partnership with Dr. Zebina M. Mowry and continued in practice until his sudden death in May, 1904. For twenty-seven years he served as director of the Milford School Board. He was president of the Union Medical Society of Wayne, Washtenaw and Oakland Counties 1876-77, a member of the American Medical Society, Michigan State Medical Society, and the Oakland County Medical Society.

Dr. William Fitch Hovey graduated from the medical department of the University of Michigan in 1853. Within a short time he located at Orionville. He served in the army during the Civil war, and on its conclusion practiced at Fenton. In 1868 he located at Milford. He was one of the organizers of the Union Medical Society in 1871. In 1875 he removed to Bay City, where he died in 1907.

Dr. Dallas Starr, who practiced at New Hudson as early as 1856, was practicing in Milford in 1873. In 1876 he sold his home and removed to Birmingham.

Dr. Calvin C. Kingsbury, who practiced at Novi for many years, opened a drug store in South Milford in January, 1874. He practiced but a short time in Milford, removing to Bay City in 1875. In 1886 he was located at Brighton.

Dr. Alexander Dunlap Hagadorn (1843-1918) graduated from the University of Michigan in 1871 and began practice at Highland. In 1874 he located at Milford. He was one of the organizers of the Union Medical Society in 1871, frequently held office in the society and in 1877-78 served as its president. In 1881 he removed to Lansing, where he practiced for many years. He was at one time President of the Ingham County Medical Society.

Dr. Cyrus Griswold Davis (1843-1899) graduated from the University of Michigan in 1871 and began practice in Tuscola County. In December, 1875, he removed to Milford, where he practiced for many

years, and was also in the drug business. He died in Milford November 20, 1899.

Dr. R. F. McTavish, a homeopathic practitioner, located at Milford in 1876.

Dr. G. B. Gregory, another follower of the teachings of Hahnemann, located here in 1877.

Dr. John D. Campbell graduated from the University of Michigan in 1878 and in November, 1879, located at Milford. He later practiced at Pioche, Nevada.

Dr. Dallas Warren (1850-1927) was born in Northfield township, Washtenaw county, the son of Hiram G. Warren. He graduated from the University of Michigan in 1879 and began practice at Highland. In 1881 he removed to Milford. In 1909 he moved to Detroit, where his death occurred.

Dr. Thomas Jefferson Jackson (1847-1930) graduated from the homeopathic department of the University of Michigan in 1880 and located at Milford the following year, practicing until within a short time of his death, which occurred in Detroit, April 23, 1930.

Dr. John C. Black (1863-1920) graduated from the Detroit College of Medicine in 1887 and located at Clyde. Within a short time he removed to Milford. He was a member of the Michigan State Medical Society and a charter member of the Oakland County Medical Society. His sudden death in March, 1920, was a distinct loss to the community.

Dr. William Grant Bird graduated from Detroit College of Medicine and Surgery in 1895 and located at Milford. He is now practicing in Flint.

Dr. Robert W. Cooper, a graduate of Michigan College of Medicine, Detroit, class of 1892, located at Highland in 1903. He removed to Milford within a short time and practiced there for some years.

The dean of present day Milford practitioners is Dr. Edward Augustus Lodge. Dr. Lodge was born in New York City on October 31, 1856, a son of Dr. Edwin Albert Lodge, who moved with his family to Detroit in 1859. Dr. Lodge graduated from the homeopathic department of the University of Michigan in 1879 and located at Milford in 1881. He is the second oldest practitioner in Oakland County, the oldest being Dr. Charles P. Felshaw of Holly, who began practice at Ortonville in 1867.

GENERAL NEWS AND ANNOUNCEMENTS

The Council of the Wayne County Medical Society, the Detroit Board of Commerce and the Mayor of Detroit, have joined in an invitation to the Michigan State Medical Society to hold the 113th annual meeting in Detroit.

Mrs. Charlotte Luce, mother of Dr. Henry A. Luce of Detroit, died at her home at Linden, Michigan, on August 13 at the advanced age of eighty-seven years. Dr. Luce has the sympathy of the medical profession in this sad bereavement.

Detroit has been absolutely free from smallpox for over a year, which is the best record the city has had within recent years. This showing is attributed to the fact that a great many people appear for vaccination even during the time when no smallpox epidemic is threatening.

"Dr. Frank A. Kelly was re-elected for the seventh consecutive time as Treasurer of the Wayne County

Medical Society by the Board of Trustees at its meeting of July 22, 1932. Dr. Kelly has been Treasurer under Presidents J. H. Dempster, G. Van Amber Brown, E. G. Martin, A. S. Brunk, J. M. Robb, H. W. Plaggemeyer and H. Wellington Yates."—*The Bulletin of the Wayne County Medical Society.*

The third annual golfing tournament under the auspices of the Wayne County Medical Society will be held on Wednesday, September 7, at the Thorncliffe Golf Club. A dinner will be served in the evening, following which will be an entertainment and the presentation of prizes to the successful players.

Dr. Vernon L. Hart will be associated with the Dayton Clinic, Dayton, Ohio, after October 1st and will be in charge of the Orthopedic Service at the clinic. At the present time he is Assistant Professor and Surgeon in charge of the Bone and Joint Division of the Department of Surgery at the University Hospital, Ann Arbor.

Dr. Albert E. Bulson, editor of the Indiana State Medical Journal, died on July 17, 1932. Dr. Bulson had been editor of the Indiana Medical Journal for nearly a quarter of a century. He was a native of Michigan where he graduated from Michigan State College in 1888 and from Rush Medical College in 1891. His specialty was ophthalmology and otolaryngology. The passing of Dr. Bulson removes one of the most versatile editors of state medical journals in the country.

The new Receiving Hospital costing the state \$300,000 at the Michigan Farm Colony at Wahjamega near Caro was opened on August 11 by Governor Brucker. Among those present were members of the State Hospital Commission. Mr. R. G. Ferguson, Chairman of the Commission, presided. The Michigan Farm Colony for epileptics was opened in 1914 with fourteen; at the present time the number of patients is reported to be 932, with 500 on the waiting list.

AN INVITATION FROM THE AMERICAN ROENTGEN RAY SOCIETY

The Thirty-third Annual Meeting of the American Roentgen Ray Society is to be held in Detroit September 27 to 30 at the Book Cadillac Hotel. Members of the Michigan State Medical Society are cordially invited. The first session, beginning at 9 A. M. on Tuesday, September 27, will be given over to the discussion of diseases of the joints, and the various aspects will be presented by Dr. Ralph K. Gormley, Drs. D. B. Phemister and C. Howard Hatcher, Dr. Walter Bauer, Dr. Max Harbin and Dr. Leo C. Rigler.

Having in mind the demands on the physician associated with the increased medicolegal and industrial practice, the session on Tuesday afternoon, September 27, will be given over to papers dealing with various phases of this subject. The material will treat "The Relation of Trauma to Arthritis," "The Relation of Trauma to Cardiac and Pulmonary Disease" and to malignancy. The discussion will also include traumatic neuroses, a paper by Dr. J. Albert Key on "Bone Atrophy" and a paper by Dr. Henry H. Kessler, who wrote the textbook entitled "Accidental Injuries" on "Anatomic Basis for Disturbed Function." There will also be a presentation by Dr. Samuel H. Rhoads, Chairman of

the Department of Labor and Industry of the State of Michigan, on "The Value of Expert Testimony."

Recognizing the importance of roentgenology in the detection and treatment of tuberculosis, a full session will be given on Wednesday morning, September 28, to tuberculosis. This symposium could well be entitled "The Ideal Program for the Detecting and Control of Tuberculosis." The various phases have been assigned to members of the Division of Tuberculosis of the Detroit Department of Health. In addition, Dr. Max Pinner will read a paper on "Roentgenological Manifestations of Allergic Processes in Pulmonary Tuberculosis."

Gynecology has been remarkably influenced by roentgenology, in both the diagnostic and therapeutic aspects, and obstetricians also find this study of value in certain cases, and the session of Wednesday afternoon, September 29, will be taken up by a discussion of the use of "Roentgenology in Gynecology and Obstetrics." Dr. Healy of Memorial Hospital of New York is to present a paper on the subject of "The Treatment of Malignancy of the Female Pelvis." A paper of equal importance will be given by Dr. George Pfahler on the subject of "Irradiation of Benign Conditions of the Uterus."

The session of Thursday morning, September 29, will deal with miscellaneous subjects, including a paper by Dr. B. R. Kirklín on "Hypertrophy of the Pyloric Muscle and Duodenitis; Their Association and Roentgenological Manifestations," a paper by Dr. Harry M. Weber on "The Roentgen Demonstration of Non-Malignant Lesions of the Colon" and a paper by Dr. Aubrey Hampton of the Massachusetts General Hospital on "Chronic Ulcerations of the Stomach." A discussion of pulmonary atelectasis will be given by Dr. Willis F. Manges of Philadelphia.

Of unusual interest to physicians engaged in the practice of radiation therapy will be the program of Thursday afternoon. The Memorial Hospital group of New York will present a series of papers dealing with the relative effects produced by 200 kv X-rays, 700 kv X-rays and gamma rays.

Appreciating the importance, especially to roentgenologists, of the work done by Dr. Max Ballin and Dr. P. F. Morse on disease and dysfunction of the parathyroids, the entire day of Friday, September 30, will be given over to the consideration of this subject under the heading "Malacic Diseases of Bones." The question will be considered clinically, pathologically and from the etiological aspect. Roentgenologically, the subject will be treated under the following headings: Rickets (fetal, infantile, late), Osteomalacia, Primary Parathyroidism (osteitis fibrosa cystica, Paget's disease, leontiasis osseum, giant cell sarcoma, ankylosing polyarthritides of Oppel, osteopoikilosis, marble disease, Kashin-Beck disease, renal rickets) Osteogenesis Imperfecta, Decalcification in Other Endocrine Disturbances (Graves' disease and thyroid deficiency, diabetes, pituitary origin-basophile adenoma, adrenal), Christian's syndrome, and Cooley's syndrome.

The medical profession is also invited to the evening sessions. That of Tuesday evening, September 27, will be a discussion of the use of the X-ray in industry and will include a paper by Dr. George L. Clark of the University of Illinois on "X-ray in Industry and other Non-Medical Fields." On Wednesday evening, September 28, the annual Caldwell Lecture will be given by Dr. A. W. Crane of Kalamazoo. Dr. Crane will discuss "The Clinical Aspects of Roentgenology."

In addition to the formal papers, special attention is being given to the Scientific Exhibit and all those in attendance at the meeting are urged to study this carefully, for much of interest is to be presented.

SOCIETY ACTIVITY

INVITED GUESTS

The following invited guests will address the sectional and general meetings during our annual session. Each one is an outstanding individual in his special field. They will make valuable and helpful contributions to our program. Those who hear them will receive profitable inspiration. Determine to be present.

Olin West, Secretary and General Manager, American Medical Association.
 Morris Fishbein, Editor, Journal A. M. A.
 Joel E. Goldthwait, Boston.
 George F. Suker, Chicago.
 M. F. Arbuckle, St. Louis.
 W. I. Lillie, Rochester, Minn.
 H. J. Parkhurst, Toledo.
 S. W. Harrington, Rochester, Minn.
 Samuel Levine, Boston.
 Joseph Miller, Chicago.
 Warren Vaughan, Richmond, Va.
 Fred Falls, Chicago.
 E. J. Matsner, New York.

WOMAN'S AUXILIARY

The Michigan State Medical Society Woman's Auxiliary is all prepared for two days of sessions and social functions during our Kalamazoo meeting. Their program will be found in this issue.

The state auxiliary is accomplishing much that is worth while and is an influential help-mate in meeting medical and health problems. We need their help and they need our assistance.

To encourage them bring your wife to Kalamazoo and while you are attending sessions have her meet and mingle with the Auxiliary at their sessions and functions.

WHY—AN ANNUAL MEETING

This issue contains the completed program for our 112th annual meeting in Kalamazoo on September 13, 14 and 15.

That program contains many reasons as to why you should be in attendance. It imparts how you may obtain personal profit. Observe the list of speakers and their subjects. Then ask yourself if you can afford not to obtain the instruction and aid that will come to you by hearing these discussions. This session will be a real post-graduate two-day course of value to every doctor.

The scientific and commercial exhibits

will also contribute worth-while information and instruction.

The "Talkie Movies," obtained through the courtesy of the Petrolagar Laboratories, will be worth seeing and hearing.

You will meet your fellow members and former classmates. The social hours will lift the burden of care and infuse a brighter spirit in you.

Sure, we are all pressed for funds—still the small expense entailed to attend will yield you dividends that will go far in reimbursing that bank account. You will have a zeal to work better and harder when you return home and that's what we all need today.

Education, instruction, inspiration, personal enhancement and a happier state of mind are engendered—that is why we have an annual meeting and urge you to attend.

REMINDERS

1. Write for your hotel reservations.
2. Register on arrival at the Registration Booth, basement of the Presbyterian Church House.
3. Plan to see the Scientific and Commercial exhibits. They are well worth your time and merit your patronage.
4. Your wife will enjoy attending the Auxiliary meetings.
5. Delegates should secure their credentials from their county secretary and present them to the Credentials Committee at the first meeting of the House of Delegates at 10:00 a. m., September 13.
6. If a delegate cannot attend arrange for the attendance of an alternate. Your county is entitled to representation.
7. Consult the official program in this issue—it contains full information.
8. The Kalamazoo profession bids you welcome.

A BIT OF HISTORY

Previous to 1887 our state society met in annual meeting for a period of three days. The sessions were general and all papers, discussions and business were presented before those present seated in a general assembly.

In 1885 it had been recommended that a committee be appointed to present a new plan of organization. In 1886 three sec-

tions were recommended but no action was taken.

In 1887, the society convened in Lansing in May. At the first session Dr. Donald Maclean moved: "To establish three sections in order to facilitate professional and scientific work, viz: A section on medicine, section on Surgery, a section on Midwifery and Gynecology. At each annual session a chairman shall be chosen, who shall serve for one year. A secretary shall be chosen for two years. These sections shall hold their sessions in the afternoon and the society shall meet in general session in the forenoon of each day."

"The motion was carried and the society proceeded to divide into sections and adjourned to their respective rooms."

The section on medicine elected as its first officers: Dr. A. W. Alvoord, of Battle Creek, chairman. Dr. H. B. Hemenway, Kalamazoo, was elected secretary.

Dr. Donald Maclean of Detroit and Dr. F. W. Mann of Detroit were elected chairman and secretary of the section on Surgery.

The section on Midwifery and Gynecology elected Dr. Geo. E. Ranney of Lansing, chairman, and Dr. N. W. Webber of Detroit as secretary.

For forty-five years sectional meetings have characterized our annual programs.

MINUTES OF THE MEETING OF THE EXECUTIVE COMMITTEE OF THE COUNCIL

The Executive Committee of the Council met in Ann Arbor on Wednesday, July 20, 1932.

Present: B. R. Corbus, Chairman; Henry Cook, J. D. Bruce, C. E. Boys, G. L. LeFevre, C. F. Moll, President; J. M. Robb, President-Elect; J. H. Dempster, W. H. Marshall, F. C. Warnshuis, Secretary.

1. The Secretary reported upon the arrangements that were being perfected for the holding of our Annual Meeting in Kalamazoo on September 13-15. After discussion of the details, the program, the local arrangements and the exhibits, the Secretary was directed on motion of Bruce-Cook to proceed and arrange for holding the scientific and commercial exhibits as in former years.

2. Upon motion of Cook-Le Fevre, in order to circumvent any discussion or criticism in regard to a controversial question, the Secretary was directed not to lease a booth to any representative of organizations active in furthering the programs related to birth control.

3. Upon motion of Bruce-Boys, the Secretary was directed to convey to the officers of the section on Gynecology and Obstetrics that it was the sense of the Executive Committee that the address of Dr. Masters should be delivered before their section and not at the combined section meeting.

4. Upon motion of Le Fevre-Bruce, the Secretary was directed to send out notices that the first meeting of the Council would be held in Kalamazoo

at eight o'clock on the evening of September 12, 1932.

5. The Secretary presented a communication from the Council of the Wayne County Medical Society requesting a rebate on the dues of three members who had been expelled from the society. After full discussion a motion by Cook-Bruce directed the Secretary to send a voucher rebating half of the year's dues to these expelled members.

6. The Secretary presented a detailed, itemized statement as to the expenses and finances of the Society. This was thoroughly reviewed. On motion of Bruce-Le Fevre, the Secretary was directed to advise all standing committees to limit the committee expenses in so far as possible and not to incur the expense of committee meetings without first making application and securing authorization for such expenditure.

7. Upon motion of Bruce-Cook, \$400.00 was appropriated for clerical work required by the Committee on Survey of Medical Service and Health Agencies.

8. Dr. Marshall and Dr. N. Sinai presented a detailed report of the work that was being done and the work that had been accomplished by the Committee on Survey of Medical Service and Health Agencies. After a free and full discussion on motion of Bruce-Le Fevre, the report was accepted and the Executive Committee expressed approval of the plan of procedure under which the committee was working.

9. On motion of Cook-Bruce, President Moll was designated to represent the Society at the Upper Peninsula Medical Society meeting on August 11 and 12.

The committee adjourned.

F. C. WARNSHUIS, Secretary.

The Upper Peninsula Medical Society held its annual meeting on August 6 and 7 at Sault Ste. Marie, Michigan. The meeting was well attended. Dr. E. H. Webster of Sault Ste. Marie was chosen president of the Upper Peninsula Medical Society for the ensuing year. The next meeting will be held at Escanaba, Michigan. A number of excellent papers were presented. The banquet in the evening was addressed by Ex-governor Chase Osborne. Drs. Carl F. Moll, Flint, Michigan, President of the Michigan State Medical Society, J. M. Robb, president-elect of the Michigan State Medical Society and Dr. Louis J. Hirschman were also speakers at the banquet.

(Continued from Page 584)

Typhoid paratyphoid vaccine, 1 c.c. vials

Typhoid paratyphoid vaccine, 10 c.c. vials

*Poliomyelitis convalescent serum, 20 c.c. vials

*Poliomyelitis convalescent serum, 30 c.c. vials

Sodium citrate, 4% solution, 2 c.c. vials

Tuberculin "OT," 1 c.c. vials

Von Pirquet, 2 test, 5 test and 50 test packages

Normal horse serum (any amount)

Rabies vaccine, Cumming, 7 doses per package

Kahn antigen, 10 c.c. ampoules

Diagnostic sera, 1 c.c. vials. Specify kind.

(Staphylococcus, Strepto-

Bacteriophage, 5 c.c. vials; coccus, B. coli,

Bacteriophage, 20 c.c. vials [B. typhosus

Effective August 1, 1932.

*Supplied by the Michigan Commission on Infantile Paralysis and consultants, during the "poliomyelitis season" (July, August, September, October)

THE DOCTORS' LIBRARY

MEDICAL CLINICS OF NORTH AMERICA. (Issued serially, one number every other month.) Volume 16, Number 1 (Philadelphia Number, July, 1932). Octavo of 290 pages with 75 illustrations. Per Clinic year, July, 1932, to May, 1933. Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1932.

NEW AND NON-OFFICIAL REMEDIES, 1932, containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on Jan. 1, 1932. Cloth. Price, postpaid, \$1.50. Pp. 492. Ivi. Chicago: American Medical Association.

The recognition of a preparation for inclusion in this book singles it out from the host of new products of the pharmaceutical manufacturers as being a worth-while addition to the existing armamentarium of the practicing physician. To be thus distinguished it must be shown, under the impartial scrutiny of the carefully chosen group which is the Council on Pharmacy and Chemistry, that it has acceptable evidence of therapeutic usefulness and that it is marketed in accordance with the honesty and straightforwardness envisaged by the excellent Rules which have been the outgrowth of the Council's quarter century experience in appraising the merits of new drugs.

In accordance with its custom of keeping the annual editions of New and Non-official Remedies in the forefront of current medical thought, the Council offers in this volume the newly revised articles: Barbitol and Barbitol Compounds; Fibrin Ferments and Thromboplastic Substances; Liver and Stomach Preparations; Mercury and Mercury Compounds; and Ovary. Perhaps the most noteworthy new preparations admitted are: nupercaine-Ciba, a local anesthetic; pentobarbital sodium, a barbituric acid derivative; and iopax, a new preparation for roentgenologic use. All of the ovary preparations formerly described are omitted and none of the new standardized preparations are described, although the names Theelin and Theolol are recognized in the revised general article. Another change of importance is the classification of articles formerly listed as "Exempted" under the heading "Accepted but Not Described." There is the usual excellent index and the augmented Index to Proprieties Not Included in N. N. R.

ANNUAL REPRINT OF THE REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR 1931. Cloth. Price, \$1.00. Pp. 100. Chicago: American Medical Association.

This volume contains the collected reports of the action of the Council on Pharmacy and Chemistry on all products which have been found unacceptable or which have been omitted from New and Non-official Remedies during the past year. It contains also the special reports authorized by the Council during the year and preliminary reports on articles which show promise but which are not yet ready for admission to New and Non-official Remedies nor suitable for general use by the medical profession. Among the reports on products found unacceptable are those on Thymophysin, a preparation of posterior pituitary and thymus, advocated as a safe and reliable means of accelerating delivery and marketed under false claims as to its essential action, as to its strength, and as to its safety for mother and child; on Bismuthoidal, claimed to be colloidal bismuth, and marketed with unwarranted claims of value in the treatment of syphilis intravenously; on Frenly Enema Cream, a complex, unscientific mixture, marketed under a therapeutically suggestive name with unwarranted claims of therapeutic value in a

host of conditions; on Hayner's Normaline, an unoriginal preparation of formaldehyde and zinc chloride marketed under a non-informing name without a quantitative statement of composition on the label or in the advertising and with unwarranted and misleading claims; on Pernocton, a barbituric acid product marketed under a therapeutically suggestive name and with unacceptable recommendations for intravenous use; on Solution Normet, an unscientific mixture of citrates, marketed with unwarranted claims; on Alqua Water, Calso Water, and Alka Water, irrational, proprietary "alkalizing" mixtures marketed with unwarranted and misleading claims. The preliminary reports on Nucleotide K 96, a preparation of pentose nucleotides which has shown promise in the treatment of leukopenia, and on Carbarsone, p-carbamino-phenyl arsonic acid, proposed for use in amebiasis but needing further confirmatory evidence of value, are both timely and interesting. Perhaps the most noteworthy are the special reports, The Intravenous Use of Barbitol Compounds and The Average Optimum Dosage of Cod Liver Oil. The former gives the Council's considered verdict on the dangers and limitations of the use of barbitals intravenously and the latter gives the result arrived at from a questionnaire sent to leading pediatricians.

RECENT ADVANCES IN PATHOLOGY by Geoffrey Hadfield, M.D., F.R.C.P., London, Professor of Pathology in the University of London, and Lawrence P. Garrod, M.A., M.B., M.R.C.P., London, Bacteriologist and lecturer in Bacteriology, Late Demonstrator of Pathology, St. Bartholomew's Hospital; 67 illustrations. Price \$3.50; Philadelphia. P. Blakiston's Son and Company, Inc.

This book of nearly four hundred pages, as the title indicates, is concerned with the latest advances in knowledge of specific diseases rather than the more abstract problems that underlie them. The authors in their selection of subjects have been guided by the importance from a clinical point of view, so that we have considerable space devoted to the pathology of respiration diseases, to Bright's disease, to the cardio-vascular system, to diseases of the central nervous system and to the ductless glands. This series of "Recent Advances" (other numbers we have had occasion to review) form a valuable supplementary literature to the older and more complete works on the subjects treated.

CLASSIC DESCRIPTIONS OF DISEASE. By Ralph H. Major, M.D., Professor of Medicine, University of Kansas School of Medicine. Illustrations. The book is beautifully printed. Price \$4.50.

This work presents in English three hundred seventy-six selections from the original, epoch-making accounts of one hundred seventy-nine authorities, whose contributions and discoveries have furnished the foundation of our knowledge of clinical medicine.

These basic materials and their one hundred thirty illustrations of unusual portraits, facsimiles of title and text pages, reproductions of apparatus and drawings, represent a wide investigation of the medical literature. Grouped by subject divisions, within each division the work is arranged chronologically. Exact references are given to the original sources. Brief summaries, and terse historical and biographical paragraphs precede each division and most author's accounts.

This new and fertile collection of selections makes available basic and fundamental works with which every physician desires to be familiar, as a most casual inspection of the contents will indicate.

It has been a long time since we have found such an interesting, entertaining and instructive text. Every student of medicine should be compelled to read it. Every practitioner should be urged to embrace the opportunity of profiting by similar study. We are indebted to the author for his contribution.

THE JOURNAL

OF THE

Michigan State Medical Society

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CONTENTS

The Problems of Medicine. Carl F. Moll, M.D.....	617	Editorial:	
The Pulmonary Cavity and Its Control. William A. Evans, M.D.....	621	Dr. Le Fevre President-Elect.....	669
Diagnosis of Early Tuberculosis in the Strict Sense of the Word. J. Arthur Myers, M.D.	632	President Moll's Address.....	669
The Diagnosis of Bone and Joint Tuberculosis. Don King, M.D.....	637	Out of Bounds.....	670
Undulant Fever (Brucelliasis). Walter M. Simpson, M.S., M.D., F.A.C.P.....	639	Trends in Medical Science.....	671
Examination of the Back. Donald C. Durman, M.D.....	645	Automobile Accidents in Michigan.....	671
The Ship Surgeon's Career. Wynand Pyle, M.D.	648	A Century Dead.....	672
The Embryohormonic Relations of the Endocrine Glands. Part II. Robert C. Moehlig, M.D.....	656	Medicine, Supply and Demand.....	672
Michigan's Department of Health. C. C. Slemmons, M.D., Dr.P.H.....	667	Medical Economics:	
		Medical Reform: Lord Dawson of Penn, London	674
		General News and Announcements.....	675
		Communications	676
		Obituary	677
		Society Activity	677
		County Societies	679
		Of General Medical and Surgical Interest.....	680
		The Doctor's Library.....	682

THE PROBLEMS OF MEDICINE

CARL F. MOLL, M.D.

FLINT, MICHIGAN

My term of office as your President has gone only too fast, and I desire at this time to express my appreciation of the honor bestowed upon me. There may have been some differences of opinion in carrying out certain policies. However, the year with its associations has been most pleasant. I express my sincere thanks to the Council, especially its Chairman and Executive Committee, for their earnest, painstaking work. My work has been made easier by the worthwhile advice of our Editor, and the rough spots have been made smoother by our most efficient and capable Secretary.

I know that my distinguished successor will direct you to new heights in medical progress, even in these perilous times.

As we survey the world today, we find conditions without precedent. We are confronted with social, financial, political and economic unrest. We find all of our precon-

ceived ideals shattered, all of our well-formulated plans for the betterment of humanity out of alignment. We find many, not only in our own profession, but in all of the trades and professions, bordering on a state of hopelessness and despair. Yet, amid all of this economic chaos, we have men en-

*Address of the President of the Michigan State Medical Society, Kalamazoo, Mich., September 14, 1932.

dowed with keen judicial minds, sublime courage and strong guiding hands, who will succeed in extricating us from our present difficulties.

Three hundred years ago, the French philosopher Rene Des Cartes wrote: "If ever the human race is raised to its highest practical level, intellectually, morally and physically, the Science of Medicine will perform that service."

We must act today.

If I can, even in a small measure, direct your thoughts and energies along lines that will bring about these desired ends, I will have attained my goal.

Of first importance is the proper education and training of our undergraduates, directed by the Council of Medical Education of the American Medical Association. The Medical Schools in this country are being conducted to give the student efficient medical training in the various scientific branches. These requirements are necessary to prepare him properly for his future endeavors in the healing art. He has had his academic, pre-medical, medical, interne training and in many instances residency in well equipped modern hospital, and quite often he spends a year or two abroad in further study.

After this intensive training he should be well prepared to enter his future work. He is told that it is his function to apply in practice the means and measures which have been found by his teachers to be of benefit. He has been well trained in laboratory work and technical procedure; he has been skillfully instructed in history-taking and has been taught how to correlate his findings; in fact, all of this preparation has had but one object, namely, that of making a good clinician. He now takes his place in the ranks of the regular profession and unless he has been happily endowed with an aptitude to care for the sick, he soon finds himself out of step, straggling on the side line or relegated to the rear.

There should be a course of lectures given in every medical school on medical ethics in the broadest sense of the term. Instruction should be given by outstanding men in active medical practice, internists, surgeons, and general practitioners; men well qualified scientifically and socially, who have the ability to impart this knowledge,

and not by the regular teaching staff of the universities.

An auspicious sign is the general interest being shown in various medical schools in reducing the time and money cost of securing a medical education, in order that a man need not use so much of his youth and years of earning power preparing for the more elemental branches of medical practice. This can well be done without reducing his professional efficiency. There has been some modified revival of the old preceptor plan. The University of Wisconsin, Harvard University Medical School, the University of California, our own State University have apprenticed students during vacation between their Junior and Senior years, to men in general practice who have been especially selected for their ability and outstanding qualifications as teachers. This is a most commendable experiment and will undoubtedly find a wider field of usefulness.

Medical service will always remain a personal service. Personal service is the solid foundation of medical practice.

The young practitioner should realize that each patient is an individual problem and cannot be treated by a standardized method similar to the assembly line as seen in a modern automobile factory. He should be willing to efface self and anxious to assume his full responsibility for the welfare of his patient. Then and only then he will begin to be of real service to his fellow men.

Articles without end have been, and are still being written, on the cost of medical care. Many of these deal entirely with local problems, others with general problems. Some of these writers have made a serious study of the various phases of the situation and have offered in many instances, plausible, constructive plans for their alleviation. Others from some personal motive, real or imaginary grievance, have written pages that will not bear close study or analysis.

With the building and equipping of the modern hospital, with its routine, X-ray and laboratory examinations, to say nothing of their special procedures, as bronchoscopy, cystoscopy, basal metabolism and many other technical diagnostic tests, it is but a logical sequence that the cost of medical care has advanced, but it has advanced no faster than this cost of our improved living conditions.

Thirty-five years ago when I began the practice of medicine, the X-ray was a scientific curiosity. Its greatest possibility as a help in diagnosis, was the location of foreign bodies and the help given us in the proper reduction of fractures. The blood pressure apparatus had not been perfected. Basal metabolism tests had never been made. The blood Wassermann was not even dreamed of. Diphtheria antitoxin, insulin and the various liver preparations used in pernicious anemia were still undiscovered. The laboratory technician and the trained nurse, as we know them today, did not exist. The number of hospital beds has increased fifty fold. Neither did we know automobiles, aeroplanes, radio, modern sanitary plumbing, vacuum cleaners, the movies, nor the purchase of practically everything on the installment plan basis.

The public demands the best, irrespective of the cost, and the doctor who is not in full accord with their wishes, soon finds himself displaced by a more obliging brother practitioner. Certainly the cost of medical care which has existed during the era of our recent so-called prosperity, is prohibitive for the great majority of our people.

And yet not over 30 to 35 per cent of the money so expended for medical care finds its way into the pockets of the family doctor. The hardest of all things, for the rank and file of the medical profession, is to see things in their true perspective, for never has such a multitude of complicated issues confronted them. If they have the best interests of their patients in mind, they do not wish to deprive them of anything that will speedily restore them to normal health. Yet we all know that we are responsible for much unnecessary hospitalization. Instead of discouraging we only too often encourage the employment of trained attendants in cases where their need is of doubtful value. We advise many needless laboratory examinations and we many times refer our patients to specialists because we have not the courage of our convictions, or we are too lazy to do our own thinking. These are matters which demand more attention and study. We must devise means that will give the great middle class the same medical care and nursing service which is now available only to the very rich or very poor. This must not be done by making them ob-

jects of charity, but by furnishing them efficient service at prices within their income. We must resist any attempt to lower the cost of medical care at the cost of lower medical service. This can best be accomplished by taking the public into our confidence and explaining the reasons for or against certain procedures. Help them to finance their unexpected expenditures. This can, in most cases, best be done through one of the local small loan companies owned and controlled by the business and professional men of their community.

There is no one factor that is as conducive to continued friendly relations between physician and patient, as a paid bill for professional services. Further, most self-respecting wage earners would not go to free clinics or dispensaries if they knew they could avail themselves of a financial service of this type to help them pay for their needed medical service. This accomplishes a threefold purpose—keeping your patient and being paid for keeping him, and greatest of all helping him keep his self-respect. The man who once accepts charity, even under dire circumstances, has lost a certain moral fineness of character that he can never regain.

A Special Committee on the Survey of State Health Agencies, which has been ably directed by Dr. W. H. Marshall, has not as yet completed its work. There is ample evidence that its final report will have a vast fund of information which will be of great help to us in dealing with the economic health problems, not only in Michigan but throughout the land. This subject is universally interesting, and any constructive work done in this direction cannot help but be of great value, especially in its relation to the general socialization of medicine and bringing forcibly to the minds of the medical profession the thought that organized medicine must assume the full responsibility of medical care, in the proper time, place and manner, if it is to continue to maintain its leadership in health matters.

The specter of State Medicine has been stalking before us perhaps more persistently of late than in the years of greater prosperity. It is my belief that this period of curtailing expenses and retrenchment in every form, and the fact that the fear of increased taxes will per se, put an end, for

the time being, to this wholly un-American idea. Furthermore, the thinking public is beginning to realize that the surest way to curtail the progress of scientific medicine is to take away the incentive for individual effort. There has been an attempt made in some quarters to link old age pensions and some type of sickness insurance, to provide modern medical care for those who are unable to otherwise procure it. Due to the more careful physical and mental selection of applicants for work in all large industrial corporations and the periodic health examination of employees, which is now part of the routine work of the Industrial Surgeon, it is inevitable that some provision will be made for old age pensions.

Sickness insurance need not be objectionable if it does not involve the medical profession in any form of governmental contracts. The history in this country of Compulsory Sickness Insurance dates from 1907, when the late Professor Henry Seager at a meeting of the American Association for Labor Legislation, held in Madison, Wisconsin, outlined a plan for wage earners which would provide for "illness not directly traceable to the employment." This plan must be sought either in Compulsory Illness insurance or in a subsidized and state divested sick insurance club. It is said that Professor Seager thought the later plan better suited to American conditions than compulsory sickness insurance.†

During the next four or five years there was considerable interest shown in this movement by various social and labor workers, notably that of Dr. Lee Frankel who was sent to Europe by the Russell Sage Foundation to study the various types of sickness insurance then in vogue on the Continent. In 1911 the Workingman's Compensation Law was enacted by the Legislature of the State of Michigan, and this legislation was also inaugurated in many other states of the Union. Active interest in Sick insurance was held in abeyance, while the experiment of the Workingman's Compensation law was being actively studied. For the following two or three years, there was not very much public agitation of the subject, but in 1915 the Social Insurance Committee of the American Association for Labor Legislation, published its

nine "Standards" for a health insurance law.

In 1915 the American Medical Association, alive to the interests of its members, appointed a special committee "to study Social insurance in its relation to the medical profession." This committee made a rather lengthy report at the Detroit meeting in 1916. Health insurance as it existed in Europe, and its relation to the medical profession, was gone into with considerable detail. This "Standard Bill" of the Association for Labor Legislation had been carefully analyzed and a rather comprehensive report of its probable feasibility as it affected the practice of medicine, was given. The Committee made no definite recommendations. At this time there was a great deal of interest taken in this subject by various social, economic, labor and medical bodies. A resolution was introduced into the House of Representatives to create a Federal Commission to prepare plans for a National Sick and Unemployment Fund. There were a number of public hearings, the chief opponents to the measure being representatives of the American Federation of Labor, and various industrial insurance companies. Nothing came of this resolution at this time. It was again brought up in the following year but was never reported out of the Committee.

Our entrance into the World War and the period of readjustment following it, caused this subject to be lost sight of and there was nothing heard regarding the matter until about 1920, when a number of states, namely, Pennsylvania, Ohio, Wisconsin, New York, Illinois and Massachusetts began to get reports from Commissions that had been created some years earlier, to study this and allied matters from various angles. The most striking thing in these reports was the wide variance of opinion held by the individual states, and by the individual members of these Commissions. The majority report of practically all of these commissions was that no legislation be recommended. It is a significant fact that there has been but little or no effort made since to revive this subject.

It is true that we have a wider application of sickness insurance than heretofore, inasmuch as we have had medical care and sick insurance in the iron, copper and lumber industries in Michigan for over eighty years.

†"The purchase of medical care through fixed periodical payments." Pierce Williams.

It has gained but little foothold in other industries until recently. In the Automobile industry it is not being practiced and a fixed regular deduction is made from each workman's wages for which he receives a fixed weekly sum in case of accident (non-compensable) or illness, and he further has choice of his medical attendant.

From this very brief review of the subject, I think you will agree with me that as long as we have united professional action in studying all theories and proposed plans for sickness insurance, and are prepared to

meet them and direct them in an intelligent manner, we shall have little to fear in an economic way.

I want to impress you, young medical men, with the fact that you can make these adjustments without great difficulty. Youth has the enthusiasm for pioneering, the eager energy for conquering new frontiers. The opportunity confronts you, and you now have the task of working up to it. Be cheerful, be unafraid, be faithful to yourselves, and we of the old guard will retire, knowing that all will be well.

THE PULMONARY CAVITY AND ITS CONTROL*

WILLIAM A. EVANS, M.D.†

DETROIT

The control of tuberculosis in the individual is largely concerned with the control of the pulmonary cavity and thus the pulmonary cavity becomes a matter of great importance in connection with spread of the disease. Because of these two facts I have elected to bring my message to you under the title of "The Pulmonary Cavity and Its Control."

One gathers from the ancient medical writings that tuberculosis, as we now know the disease, has afflicted humanity since the earliest times. Always it has been recognized as a disease without geographic or racial limitations and one that attacked individuals of all ages and of every social station. Hippocrates (460-377 B. C.) had a profound knowledge of the disease, both clinical and pathological, as revealed by Adams' translation of his works. He recognized it as an epidemic disease and one of his contemporaries, Isocrates, considered it a contagious disease. Additions to the knowledge of the pathogenesis of the disease were made by Celsus (30 B. C.-50 A. D.), Aretaeus Cappadox (50 A. D.) and Galen (131-201 A. D.), but no new information was advanced for nearly eight hundred years, or until Rhazes or di Razi of the Arabian school built on the opinions advanced by Hippocrates and Galen. Dr. Sadi recently translated for me from a chapter on tuberculosis in the works of this Arabian physician and it was evident that the early worker had a keen appreciation of the symptoms of tuberculosis in its various stages and was familiar with the importance of cavitation, and hemorrhage as a complication of cavity.

Then two hundred more years elapsed before medical literature was enriched by writings on this disease. Maimonides (1135-1204) obtained knowledge of its pathological anatomy by studying animals slaughtered by Jewish people for food, but he made no original or especially valuable contributions.

It was not until late in the seventeenth century that the particular tuberculous lesion we are especially interested in was clearly recognized and described. Franciscus Deleuve Sylvius (1614-1672) was the first to describe ulceration of the lungs as due to supuration of tubercles and thus to appreciate one of the methods or processes of cavity development.

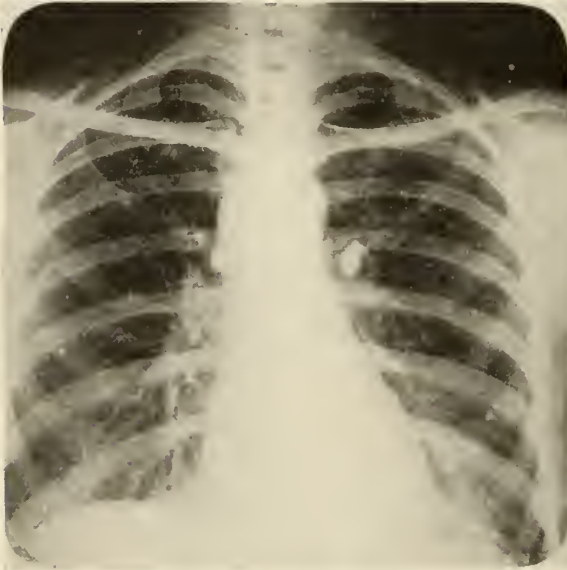
With the development of modern pathologic studies, knowledge of tissue change in tuberculosis rapidly accumulated and clinicians using the methods advanced by Auenbrugger in his work on "Percussion of the Chest" and Laennec on "Auscultation" were often able to determine during life of the patient the various stages and lesions of the disease. However, since intrathoracic tissue change has been so accurately recorded and revealed by satisfactory roentgen records, it

*This paper was presented before the Detroit Academy of Medicine. Surgery by Dr. E. J. O'Brien. Pneumothorax by Dr. R. C. Morgan.

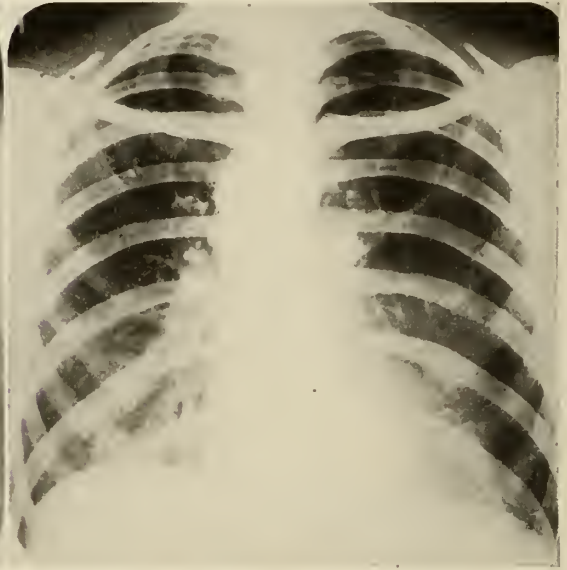
†Dr. Evans was graduated from the University of Michigan in 1902. After seven years of general practice he began the study of roentgenology in 1911, where he was associated with the late Dr. P. M. Hickey. He is a member of the Detroit Board of Health and for the past year he has been president of the American Roentgen Ray Society.

is evident that the former methods of determination of lung disease had serious limitations and that only comparatively gross lesions were detected by such examination.

Cavity Development. To comprehend the process of cavitation, an accurate knowledge of tissue response to the tubercle itself or its products is necessary. These responses



Case 1, Fig. 1. Thin walled round cavity opposite left first interspace anteriorly. Lesion simulates "annular shadow." No perifocal reaction. Positive sputum.



Case 1, Fig. 2. Same as Fig. 1 nine days following increasing pneumothorax. Note change in position and contour of cavity. Lung about 50 per cent collapsed. Diagnosis of cavity confirmed by findings.



Case 2, Fig. 3. Early exudative lesion in upper right lobe, with beginning excavation. Early relaxation therapy for right lung paralysis indicated.

Thus Pinner and Douglas, of the Detroit Department of Health, studied a series of patients in the Maybury Sanatorium and by thorough physical diagnosis only seventeen per cent of cavities were recognized previous to a roentgen study.

are well described in Krause's book, "The Evolution of the Tubercle," as follows:

1. Proliferation—the essence of native tissue response.
2. Exudation—the essence of allergic response.
3. Necrosis—an anatomical end product of inflammation (exudation).
4. Fibrosis—an anatomical end-product of proliferation and also, no doubt, of the inflammation of allergy.

These several reactions have a characteristic appearance in the roentgen film and their recognition is necessary if one is to prognosticate the probable course and direction along which a given tuberculous reaction will proceed, and such prognostication is indispensable if the correct mode of treatment is to be selected.

It must not be assumed that these reactions occur or are found in a pure form in a given case or at a given time. Rather, usually all are present and in a state of constant change and it is by the inter-reaction of these processes that a cavity develops and that cavities are of variable size, form and type.

Cavities have been variously classified,

but it remained for Pinner to suggest a classification according to structural peculiarities roentgenologically recognized, this classification having prognostic and therapeutic

tion. These lesions may clear by resolution or by re-expansion of the lung if atelectasis be present, or extensive and rapid destruction may occur, resulting in larger cavities.



Case 3, Fig. 4. Single moderately thick walled cavity in lower right. Normal level of right diaphragm.



Case 3, Fig. 5. Cavity closed by right phrenic paralysis. Note high position of right diaphragm.

application. He finds that all cavities can be grouped roughly under three types:

1. Round cavities.
2. Small multiple cavities.
3. Fibrotic irregular cavities.

1. The *round cavity* is always preceded by an infiltrative lesion, as a study of several roentgenograms will prove. This type of cavity results from a loss of tissue due to an exudative lesion in combination with the formation of a new cavity wall consisting of a thin layer of connective tissue fibers concentrically arranged. The regular form of these cavities is maintained by the new formed wall, and by the eccentric tension of the surrounding lung tissue.

The size of these cavities varies from one to eight or ten cm. The wall thickness is variable. With an extensive zone of reaction, further necrosis or liquefaction occurs with increasing size of cavity.

2. *Small multiple cavities.* This lesion is usually described in roentgen reports as "moth-eaten in appearance." The condition is one of numerous small cavities surrounded by an exudative process. Histologically the individual cavity represents a loss of tissue in an area of tuberculous bronchopneumonia, without a tendency to wall forma-

In the case of small areas of involvement, a round or oval cavity may be the result.

3. *The fibrotic irregular cavity.* The roentgen appearance in this type is variable, depending on the size of excavation, extent of the zone of surrounding reaction and the degree of pleural thickening. The most important feature is the white line or band of dense tissue which forms part of the wall and which can be traced into the gross lung structure.

Period of Cavity Development. When the diagnosis of cavity was made by physical examination alone, it was the opinion that cavitation was a late manifestation of tuberculosis. Even now, according to the classification of the National Tuberculosis Association, the presence of a cavity is considered an indication that a case is far advanced. Roentgen studies have taught us that excavation of a tuberculous lesion is a very early process, probably occurring at times within two weeks following the primary pulmonary consolidation. Further, that extensions of the pulmonary involvement and additional cavity formation may be attended with symptoms not more serious than a "common cold." It should be emphasized that these early formed cavities are of

the "round" type; naturally more time is required for the development of fibrous walls.

Differential Diagnosis. It would seem that the recognition and classification of cavities would present no difficulties. Yet

on "The Significance of Annular Shadows on Chest Films." We believed that such markings represented local pleural proliferation. We now know that many, if not all, of the so-called annular shadows are true cavities.



Case 4, Fig. 6. Thin walled cavity in right mid lung field.



Case 4, Fig. 7. Closure of cavity by phrenic neurectomy. Note elevation of right diaphragm.

such is not the case. Careful study of stereoscopic films made at various angles, and the patient in several positions, may be required, because the normal lung markings or exaggerated markings may so produce shadows on the films that cavity is simulated.

And again, the presence of thickened pleura may entirely obscure the underlying lung detail, or fluid in the pleural cavity will act in the same manner. Further, there is a type of pulmonary disease characterized by extensive lung consolidation and a paucity of symptoms. In this, large areas of the chest show uniform clouding, or a small area of consolidation may rapidly extend, so that within a few days an entire lobe may become involved. It has been observed that these lesions undergo irregular resolution or absorption and if this process or these processes occur in the center of the lesion, an appearance of cavity formation results. This misinterpretation may have serious consequences, for radical treatment may be instituted instead of the conservative bed rest and supportive therapy indicated.

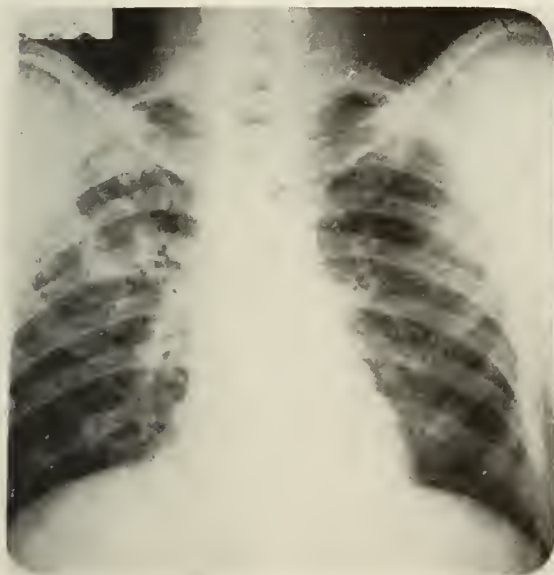
Some years ago I was guilty of presenting a paper before a group of roentgenologists

Mutation in Size and Position. In the communication on annular shadows above mentioned, one of the arguments supporting our contention that these did not indicate cavitation was that they developed too quickly and that their position changed from time to time. Greater experience, keener observation and better judgment tell us now that all of these conditions are observed as features of true cavity and that they are dependent on various factors, such as the elasticity of the lung tissue, accommodation of the intrathoracic structures to varying pressures, and varying degrees of atelectasis and other conditions, such as traction from fibrous tissue and adhesions.

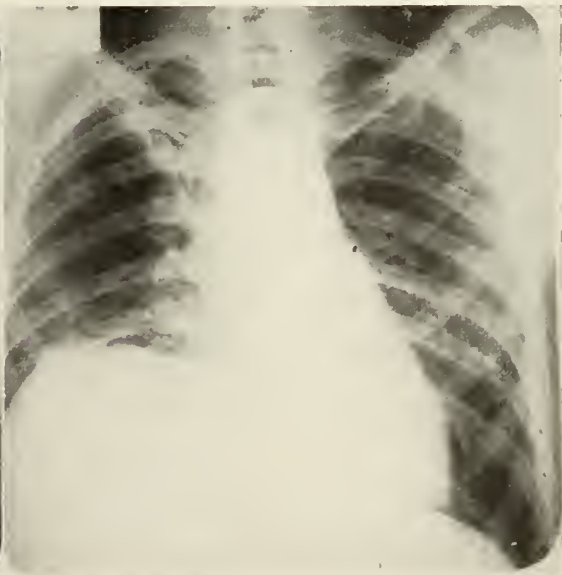
Distribution of Cavities. Sweaney, Cook and Kegerreis of the Research Laboratories of the Municipal Tuberculosis Sanitarium, Chicago, recently made a study of 2,204 patients, 1,209 of whom had cavities. Of these, 268 cavities were of such nature that they could be actually measured and localized. This study determined that the distribution of the lesion on the right and left sides appeared to be directly proportional to the lung volume of the respective sides, that

they were mostly distributed in the posterior and outer part of the upper lobes and apices of the lower lobes and situated from 1.5 to 3 cm. beneath the pleura corresponding to the fourth and fifth order of bronchi. Thus the lesions were practically all "infraclavic-

have not taken into account the fact that they were working with a selected group and that a prolonged hospitalization was required; neither did they anticipate the large number of cavities that would recur when the patients were returned to active life.



Case 5, Fig. 8. Multiple cavities in right upper lobe, with irregular walls and peritubercular reaction.



Case 5, Fig. 9. All cavities closed as a result of elevation of right diaphragm induced by phrenectomy. Cases 3, 4 and 5 prove that cavities at any level can be controlled by phrenic paralysis.

ular." They further observed that about 98 per cent were situated on bronchi that are directed sharply posteriorly. They concluded that the position of the early cavities indicated a common mechanical factor of origin, suggesting a bronchogenic spread resulting from "a lack of clearing facilities" of the particular bronchi.

Importance of Cavities. Numerous and extensive studies have been made in an effort to evaluate the clinical and prognostic significance of cavities, and the conclusions are not in accord. While all appreciated that these lesions indicated advanced disease and that they required active treatment, they apparently did not comprehend the rôle the uncontrolled cavity played in reinfecting the patient, either by bronchogenic, lymphogenous or hematogenous spread; nor did they realize that the uncontrolled cavity rendered the carrier an active spreader of the disease to others. Even some recent workers have attempted to minimize the importance of cavities, basing their claims on the number of small cavities apparently closing under bed rest treatment alone. These writers

An additional hazard from cavity is the association with hemorrhage, either repeated or massive. Still another danger is the possible rupture of the cavity into the pleural sac with resulting empyema; also considerable morbidity results from secondary infection of the cavities with the more virulent microorganisms.

Methods of Healing Cavities. Dutcher, in a communication to the Medical and Surgical Reporter of Philadelphia in 1864, preliminary to the reporting of a case of cavity healing, discussed the subject of the healing of tuberculous cavities under four subheads:

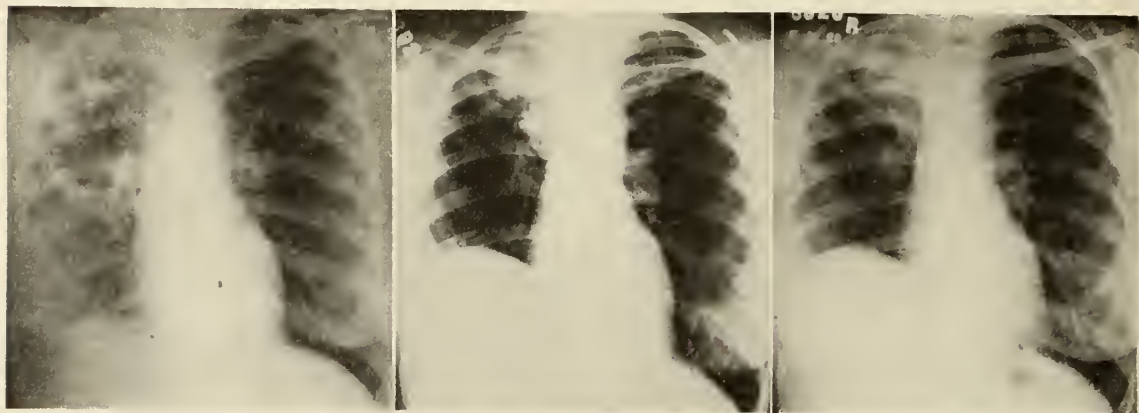
1. The possibility of healing.
2. The mode in which tubercular cavities may heal.
3. A large cavity more apt to heal than small ones.
4. Therapeutics for the healing of tubercular cavities.

1. This writer had knowledge of pathologic findings, being familiar with the teachings of Bogle, Laennec and Louis, who held that cavities in tuberculosis may heal spontaneously and that many healed cavities

were found in patients dying from tuberculosis. They also observed that in the same patient cavities in all stages of development, formation and healing could be found. Dutcher decried the custom of offering no

disease and various types of the disease and that he did not have full knowledge of cavity variation.

4. Under therapeutics he held that certain drugs were specified to a degree and



Case 6, Fig. 10. Multiple cavitation in upper right. Note varying sizes and thicknesses of walls and marked perifocal reaction.

Case 6, Fig. 11. Results of phrenic paralysis one year following operation. Note single small cavity remaining.

Case 6, Fig. 12. All cavities controlled after three years.

hope to the patient with a diagnosis of cavity, the then so-called third stage.

2. This writer was apparently familiar with the detailed course of tuberculous lesions, knowing that there could be complete resolution of such lesions without fibrosis, or that healing of lesions occurred by fibrosis and later absorption, or, lastly, that certain lesions healed by cavitation. He described the three modes in which the healing of a tuberculous cavity may be effected:

(a) The cavity may remain open, the surface being lined with a thin layer of plastic lymph which adheres to the surrounding structures, gradually organizing and finally being converted into a membrane which shields the cavity and prevents its further extension.

(b) Healing may be effected by the contraction of the cavity as a part of the fibrosing process, the slow and steady agglutination of its walls by the intervention of dense cellular substance of new formation.

(c) By an effusion of coagulative lymph or by repeated deposition on the inner surface of the cavity wall which gradually obliterates the cavity by organization.

3. As regards Dutcher's contention that a large cavity had a more favorable prognosis than a small one, the arguments advanced were not convincing. It is evident that he was confusing various stages of the

claimed value for cod liver oil, iron, iodine, bromine and quinine. Also he stressed hygienic regulations.

At this early period, none of the mechanical, physical or anatomical factors favoring cavity healing were known other than the advantage of rest.

Treatment of Cavities. The earliest writings describe operations or procedures dealing with conditions within the chest considered to be cavities but such descriptions indicate to us that empyemal cavities or localized destruction associated with pulmonary abscesses were being dealt with.

It is less than a hundred years since the first attempt was made to treat lung cavities of tuberculous origin by accepted surgical means. Mosler of Greifswald, Germany, apparently is entitled to the credit of being the first to consider or suggest such treatment. Reasoning from the experience gained in treating external ulcers he decided that a similar internal lesion would respond in a like manner. Accordingly he opened and drained a superficial consumptive cavity using a silver drainage tube through which to make his applications.

It is interesting to note that at this early time the association of cavities and pleural adhesions was recognized and the danger of the development of a pyopneumothorax from communication with the pleural cavity

was appreciated. While no favorable results were obtained in the treatment of cavities of tuberculous nature, the method was later adopted for the treatment of cavities of acute infectious origin with success.

- (3) The more recent methods proposed.
- (4) The dangers and disadvantages of such treatment.
- (5) The clinical results of this mode of treatment.



Case 7, Fig. 13. Bilateral cavities in partially collapsed lungs. Pneumothorax only. Note large cavity in upper right.



Case 7, Fig. 14. Increasing pneumothorax with complete cavity control. In spite of extreme collapse of lungs, vital capacity is well maintained.

Christian Fenger and J. H. Holliston of Chicago reported such method of treatment in detail in an article published in the *American Journal of Medical Sciences* in 1881, October, page 370, and by so doing established a method which has been continued in use to this time.

In an earlier issue of the *American Journal of Medical Sciences* (October, 1874, p. 313) is found a contribution by William Pepper, Clinical Professor of Medicine in the University of Pennsylvania, entitled "On the Local Treatment of Pulmonary Cavities by Injection through the Chest Wall." Simultaneously with Mosler of Griefswald (previously mentioned), but independently, Pepper conceived the idea that benefit would follow direct local treatment of pulmonary cavities. While he considered this method as early as 1867, it was not until February, 1874, that it was actually practised. In this communication, Pepper discusses

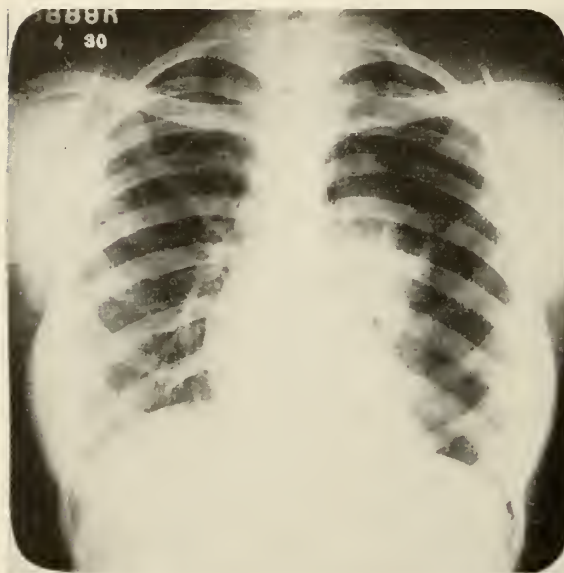
- (1) The history of the direct local treatment of pulmonary cavities by thoracentesis.
- (2) The indications it is designed to meet.

It is Pepper's contention that though there is conclusive evidence that Hippocrates, Galen, Rhazes and other earlier physicians performed the operation of thoracic paracentesis, the conditions treated were probably empyemal or pulmonary abscesses rather than cavities associated with tuberculosis. The clinical histories of such operated cases positively support this contention. This procedure was apparently entirely neglected in the middle ages and it was not until 1696 that Baglivi described an operation he had seen done in Padua seven years previously in which the thoracic cavity was explored through an incision between the ribs six fingerbreadths in length. He speculated with the following language: "A phthisick arising from an ulcer is commonly branded as incurable upon the plea that the ulcer is internal and occult, and cannot be cleaned like other external ulcers. But why do they not make it their business to find out the true situation of the ulcer and make an incision accordingly between the ribs, to the end that proper remedies may be conveyed to it?"

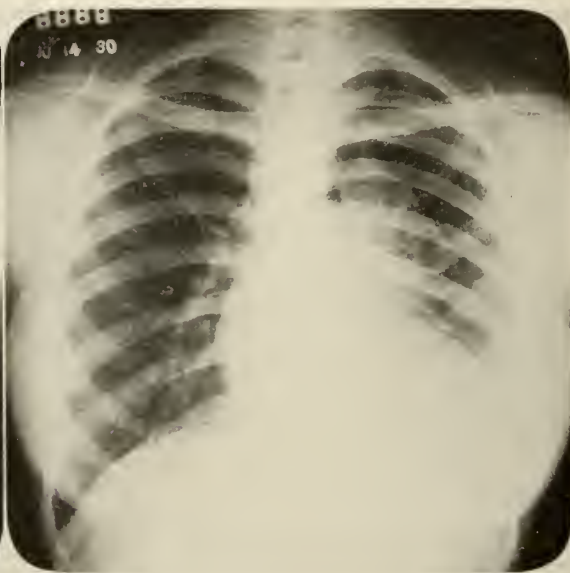
In 1727 a much more valuable contribu-

tion to the subject was made by Barry (Treatise on Consumption, 2nd Edition, London, 1727, page 267). In this article the anatomical relations of phthisical cavi-

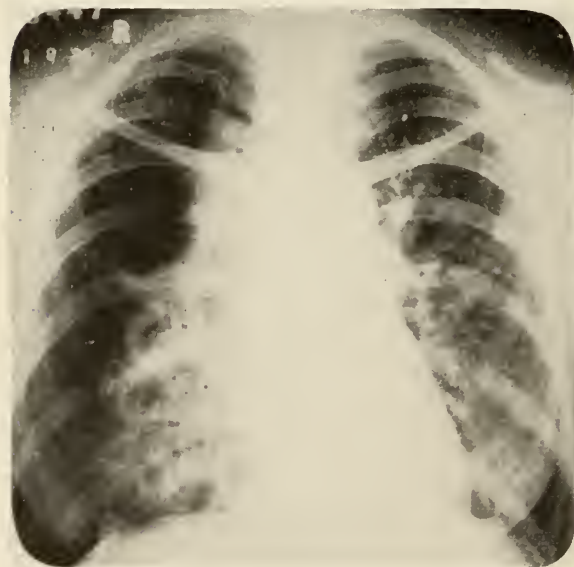
But as stated previously the description of the cases and the operative findings suggest that none of these cases represented an opening of a true tuberculous cavity. Pep-



Case 8, Fig. 15. Cavity in upper left lobe not controlled by continued pneumothorax.



Case 8, Fig. 16. Cavity completely controlled by paralysis of left diaphragm.



Case 9, Fig. 17. Multiple cavities in right lung not controlled by pneumothorax. Active lesions in contralateral lung.



Case 9, Fig. 18. Control of all cavities by induction of right phrenic paralysis. Lesions in left lung show improvement.

ties were described, special mention being made of pleural adhesions as a result of which the cavities could be incised without danger. As one of the advantages of surgical exposure Barry adds that "the ulcer may be more easily cured by deterging and healing injections."

per records several other references to this procedure during the early nineteenth century but is impressed by "the almost entire failure of this operation to attract even the criticism of eminent observers." However, he made a wise observation when he wrote that "the method was probably condemned

by medical pathologists on the ground that it was directed only against a local expression of an incurable constitutional disease."

Pepper appreciated the clinical and prog-

was usually associated with severe clinical symptoms.

By the local treatment of cavities he hoped to establish drainage, thereby lessen-



Case 10, Fig. 19. Large, poorly drained cavity in upper right, not controlled by phrenic paralysis and collapse not obtained by pneumothorax.



Case 10, Fig. 20. Complete control of cavity by upper stage thoracoplasty.



Case 11, Fig. 21. Upper stage thoracoplasty with pathological lung tissue remaining in lower right.



Case 11, Fig. 22. Complete right thoracoplasty, with full control of right lung lesions.

nostic importance of cavity, for, in 4,530 cases he had studied showing cavity, only 81 seemed progressing toward a cure of cavity—1.8 per cent. He also knew the dangers of cavity as the risk of hemorrhage, the danger of the development of miliary tuberculosis; also that the presence of the cavity

ing irritation and associated cough, cleanse the cavity, increase rest for the tissues about the cavity with resulting tendency to scar formation and prevention of cavity extension.

The method involved the use of freezing as a local anesthetic, the introduction of a

small cannula and the injection of a weak iodine solution—5 to 25 minims—once a week.

Clinical observations and post-mortem

ment and this phase will be presented as the paper proceeds.

The aim and purpose and intent of all of the agencies is the reduction in the volume



Case 12, Fig. 23. Cavity in lower right visualized by introduction of radio-opaque oil.



Case 12, Fig. 24. With patient treated by position favorable for cavity drainage oil has entered terminal bronchus in base of upper left lobe, thus demonstrating method of bronchogenic spread.

studies convinced Pepper that the mode of treatment had no disadvantages and that no complications developed. He concluded that in several cases the general symptoms were lessened and in one case he considered the treatment had brought about a healing of the cavity walls with fibrosis and contraction. But Pepper was not permitted to practice or advocate such methods without criticism. James H. Hutchinson, in an original communication entitled "The Local Treatment of Pulmonary Cavities by Injection through the Chest Walls" published in the Medical Times, Vol. IV, May 30, 1874, page 548, makes an effort to show that Pepper's method had no originality and possessed no value. He gave a more complete history of operative procedures and reasoned from a pathologic basis how these were doomed to failure.

Modern Control of Cavities. No attempt is to be made to discuss in a historical sense the surgical procedures constituting modern treatment. Their introduction and development are relatively recent and generally well known and understood. However, their application is undergoing change and advance-

of the pathological lung, a condition favoring or necessary to lung healing. By the use of artificial pneumothorax the lung volume is reduced without any appreciable change in the capacity of the thoracic cavity.

By virtue of the elastic quality of the lung and the negative pressure in the thoracic cavity, the lung volume is lessened by relaxation or collapse as the degree of negative pressure is reduced by the injected air. The lung volume can also be lessened by reduction in size of the thoracic cavity and this can be brought about by three methods—either temporarily or permanently by phrenic crushing or phrenic neurectomy, or by the varying degrees of resection of the ribs permitting collapse of the thoracic wall, or, thirdly, by the establishment of positive pressure in the thoracic cavity. This positive pressure may be obtained by the injection of air under pressure or by the introduction of some material that can be expanded, between the diseased lung and the thoracic wall.

It should be stated that a reduction in the size of a thoracic cavity may be brought about by a shifting of the mediastinal con-

tents. This method is used to equalize pressure in the event that tracheal or cardiac displacement is productive of important symptoms.

The quality and the extent of the disease in a given lung will determine whether one or more of the procedures will be employed. It is relatively rare that pneumothorax alone will suffice. And it should be interjected here that the minimal use of all methods is the ideal practice—that no lung should be permitted to collapse except to that degree required for obliteration of the cavity and for bringing about a negative sputum; or that rib resection will be limited in extent and location to the degree necessary to make sufficient compression to control cavity and sputum. In all cases other than the minimal, pneumothorax should be combined with phrenic neurectomy. The reduction in lung volume by diaphragm elevation may or may not be necessary to bring about cavity and sputum control, but in any event the lung impaired by the lesion needs the protection against recurrence afforded by the phrenic paralysis.

The procedure of rib resection or thoracoplasty is indicated when the less radical methods fail. It should be emphasized that this operation is never undertaken until pneumothorax has been accomplished, or, if not accomplished, that pleural symphysis be proved by repeated and thorough attempts at air injection. And further, all thoracoplasties must also be preceded by the surgical paralysis of the diaphragm.

It would seem that intelligent and successful management of lung lesions by surgical means is quite impossible without the guidance afforded by roentgen studies. It is therefore incumbent upon the roentgenologist that he be able to interpret lung shadows in pathological, clinical and surgical terms. Lacking this ability, he will deprive many patients of their opportunity for improvement or recovery by failure to provide the clinician or surgeon with information necessary for proper handling of the case.

To return directly to our subject, neither pneumothorax nor phrenic paralysis alone or in combination will bring about obliteration of all cavities. This failure of cavity collapse may be due to three conditions: pleural adhesions, pulmonary consolidation or a greatly thickened or very firm cavity wall.

In the event that adhesions are present,

preventing approximation of cavity walls, pneumothorax should be persisted in or positive intrapleural pressure be applied for periods of six or eight months, providing there are no indications for more active therapy, such as severe hemorrhage, extending lesion or enlarging cavity. Patience in this regard will greatly reduce the number of patients subjected to the more serious and difficult intrathoracic operation of adhesion section. Illustrating this point, of 250 patients under pneumothorax treatment and presenting adhesions, only six failed to have their cavity controlled and became indicated for pneumolysis. Should it become necessary to sever the adhesions, however, two methods are available, one the closed or so-called Jacobean's method which involves the passing of two tubes into the thorax, one to carry illumination and the other for instrumentation, and the open method which was developed by our colleague, Dr. O'Brien. In this method the adhesion bands are exposed through a very small opening and operated on with the advantage of direct vision, thus permitting refined surgical technic.

Contraindications to Surgical Measures. Early in the development of these methods, patients presenting bilateral lesions were considered unfavorable but gradually the various procedures have been tested and it is now known that disease in the contralateral lung does not render the case inoperable. On the contrary, it is frequently observed that control of an advancing lesion in one lung will have a most favorable influence on a lesser lesion in the opposite lung. The tendency to include more and more cases in the operable group and the tendency to multiple procedures in a single case have advanced to where a patient with relatively advanced bilateral disease will be the subject of bilateral pneumothorax, bilateral phrenic neurectomy and limited bilateral thoracoplasty. Thus the contraindications would be confined to the far advanced or hopeless bilateral cases or those having other foci of involvement, and even then great caution should be taken before so classifying a patient.

Comparative Results. Numerous statistical studies have been made to determine the advantages, if any, of this active and apparently radical treatment over the more conservative methods of rest and support and in every instance the figures indicate the

great superiority of the new methods. For instance, Barnes and Barnes followed 1,454 cavities in a Rhode Island sanatorium and observed a mortality of eighty per cent within one year and ninety per cent within five years, and an average life duration of only 15.8 months. Springman studied 626 cases occurring in industrial laborers over a period of sixteen years and found a total mortality of 78.2 per cent and a 61.7 per cent death rate for the first two years. Of the small group remaining, 69.1 per cent were totally or partially disabled and only 4.1 per cent of the whole number were working. Contrast this with Newberger's smaller group of 86 engaged in trades and labor, of whom 61.6 per cent were able to work, only 21.0 per cent were incapacitated and but 17.8 per cent had died.

In our own service, Werner and O'Brien made a comparative study with the results similarly favoring modern treatment. Further proof, if necessary, could be fur-

nished from the statistical reports of the William H. Maybury Sanatorium and the Herman Kiefer Hospital. The percentage of patients discharged as cured or arrested had increased from 8.1 per cent in 1927 to 34.1 per cent in 1931 and the reduction in the death rate has been equally satisfactory, at the Maybury Sanatorium from 25.8 per cent in 1927 to 10 per cent in 1931 and at Herman Kiefer from 35 per cent in 1927 to 21 per cent in 1931.

Conclusions. While there are many factors influencing favorably the death rate from tuberculosis, one must conclude that early case finding, early hospitalization and the early institution of active surgical methods are responsible for the excellent record in Detroit and Wayne County. Furthermore, the successful treatment of tuberculosis has become one of surgical procedure rather than medical. At least the medical treatment simply supplements the surgical procedures.

DIAGNOSIS OF EARLY TUBERCULOSIS IN THE STRICT SENSE OF THE WORD*

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MINNEAPOLIS, MINNESOTA

The diagnosis of early tuberculosis has been talked and written about since the early part of the twentieth century. In fact, it has been one of the goals at which the workers have aimed, since, if tuberculosis could be diagnosed early, the focus of infection could be stopped, the ultimate prognosis of the case could be improved by the institution of treatment immediately, and the duration of treatment shortened, generally speaking. At one time, we spoke of incipient tuberculosis; in fact, in classifying the disease into stages provision was made for the so-called incipient case. At a later time, attention was called to the true meaning of the word incipient, and the fact was pointed out that by our methods of examination at that time we never detected the disease in its incipency. Then the word minimal was substituted for incipient, the thought being that minimal tuberculosis was about the smallest amount of disease that could be demonstrated by methods then extant. But the term early tuberculosis brings the time element into the picture and our methods are now sufficiently

refined so that tuberculosis can be diagnosed early in the strict sense of the word.

At one time we relied a great deal upon symptoms and physical signs, particularly râles persisting after cough, in the diagnosis of what we called early tuberculosis. It is not so long ago that finding tubercle bacilli in the sputum in many cases was thought to be an early manifestation of the disease. Careful observation and study has shown that in the vast majority of cases one cannot depend upon any of these for the diagnosis of early tuberculosis in the strict sense of the word. We know now that the disease may exist months and years, all the time

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progressing slowly but surely without causing a single symptom. We also know that the disease may be present in a considerable part of one or both lungs and yet by our

Sir Philip's work in the *British Medical Journal*, January 10, 1931, and should apply his measures in every age period of life. He says, "Continued observation of the nat-



Fig. 1. Made from an X-ray film taken on September 4, 1929, of the chest of a hospital intern who had been negative to the tuberculin test. Following exposure to tuberculosis the tuberculin test became positive and the lesion in the right second interspace appeared on the X-ray film.

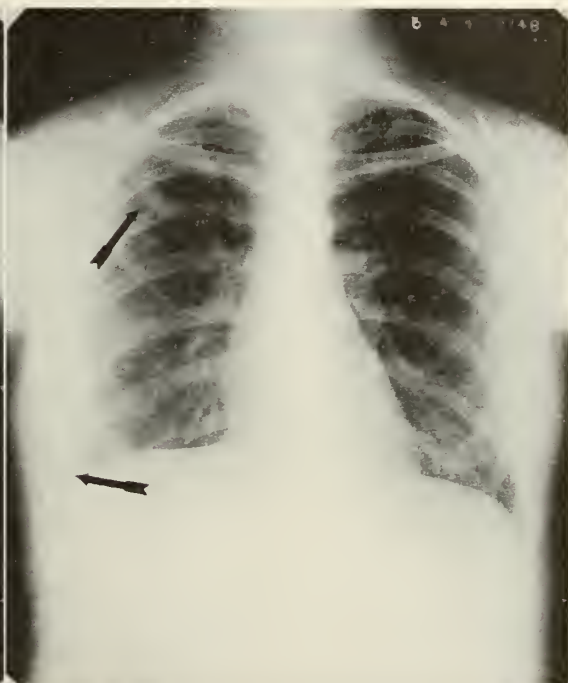


Fig. 2. Made from an X-ray film taken on May 4, 1931, of the same chest as seen in Figure 1. Pleural effusion appeared since the last film was made but has already absorbed. There is some thickening of the pleura at the right base with partial obliteration of the right costophrenic angle. In the right second interspace, partially hidden by the second rib, one sees the tuberculous lesion, which we believe to be the first infection or childhood type of tuberculosis.

methods we are unable to elicit a single abnormal physical sign. Moreover, we know that the disease often exists over a considerable period of time before the lesions break down the tissues, ulceration occurs, and tubercle bacilli are discharged into the bronchi or their ramifications, resulting in sputum positive for tubercle bacilli. Only about one in three of the patients with demonstrable minimal tuberculosis have tubercle bacilli which we can demonstrate in their sputa. Therefore, we were compelled to look for more refined methods of detecting early tuberculosis.

The tuberculin test after shifting from one part of the stage to another has recently developed into the most important factor in the diagnosis of early tuberculosis. Sir Robert Philip, a pioneer in serial tuberculin testing, gave us some of the most valuable fundamental principles that have ever been known in tuberculosis control. Every physician should read the recent summary of

ural history of the infection, the lessons of experiment, and the facts of comparative pathology—for example, tuberculosis as it occurs in cattle—together with the introduction of tuberculin tests, have made possible a truer perspective.

"The gradual dissemination of tuberculous infection and the resultant disturbance have been followed from the point of infection through the lymphatic system to involvement of the various viscera. The march of events may be readily studied in animals, when inoculated either naturally or artificially. In the human subject, it is one of the privileges of age to have had the opportunity time after time of watching the procession of events in the same individual from the date of initial infection and trifling manifestations, through the varying phases of the infected individual's life. It has been possible for me in numerous instances to trace the development of tuberculosis in the

same subject in ever-changing form, from the seed stage up to full fruition, in some instances for thirty years or more."

Again he says, "Having regard to the

in every medical school, we would be much further in early diagnosis work since we would not have to break down the misinformation which exists in the minds of

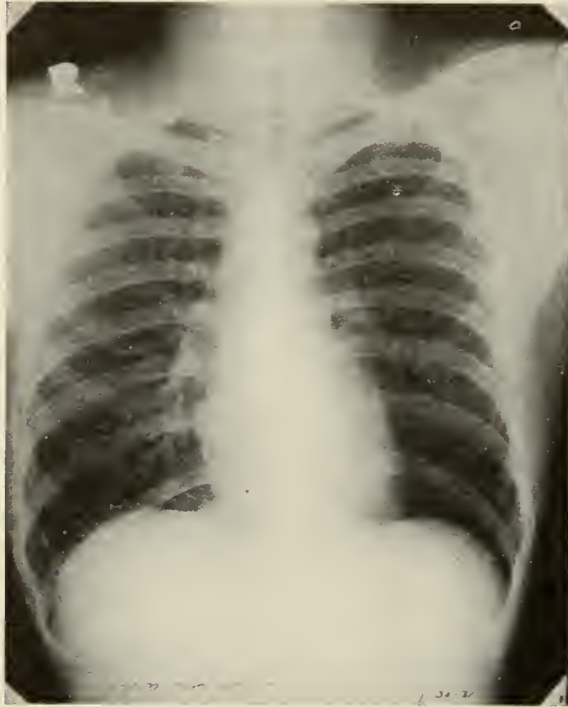


Fig. 3. Made from an X-ray film taken on January 30, 1931, of the chest of a sophomore medical student whose tuberculin test was negative a year before. This student was exposed to tuberculosis in the winter and spring of 1931. In January, 1931, the tuberculin test was markedly positive, but this film shows no evidence of tuberculous disease. In other words, the tuberculin test was the first manifestation of its existence.

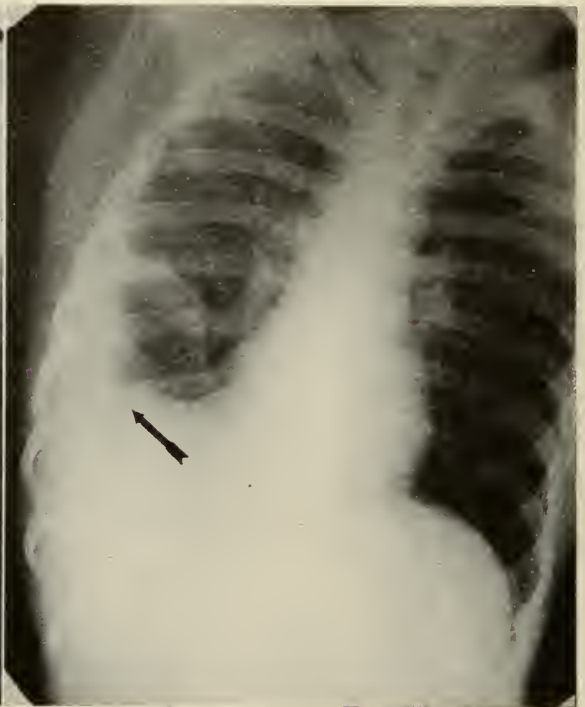


Fig. 4. Made from an X-ray film taken on May 11, 1931, of the same chest as seen in Figure 3. In the third interspace on the right side near the periphery, one sees slight infiltration. By special X-ray technic a fluid level is demonstrated on the right side.

likelihood of infection in the course of childhood, and the difficulty of assessing the ultimate consequences of such infection, I am firmly convinced that the general use of tuberculin as a diagnostic agent in childhood is most desirable. Because of the likelihood of infection, the tuberculin test should become routine practice at stated intervals from early infancy onwards. The procedure is painless and harmless; yet the knowledge obtained by it is priceless.

"So long as the reaction remains negative, nothing further is necessary. Whenever a positive reaction is obtained for the first time, the fact and the date should be recorded. The fact of tubercularization, and the date of its first detection, are of immense significance in the life-history of the child, having regard to the possible implications."

Had the work of Sir Philip been taught

many physicians that approximately 100 per cent of young adults react positively to the tuberculin test. Although this has been disproved over and over, it is not an uncommon experience to read in current literature that nearly everyone has had a "touch" of tuberculosis. One finds it in magazines, in recent textbooks for medical and nursing students. The old statement that it requires ten years to get newly established facts incorporated in our textbooks is true except that it takes longer with tuberculosis.

Much of the work of the veterinarians, the physicians, the nurses, and closely allied health workers has borne fruit so abundantly that now in many parts of this country, the first infection from tuberculosis is received by individuals in adult life. Tuberculosis has been completely eradicated from the cattle herds of whole counties in some parts of the country. Even among human beings, where the problem is far more difficult, there are places where it has been re-

duced to such a low percentage that even the most enthusiastic workers can hardly believe the facts. The fewer the number of foci by way of open cases in a community, the

milk of these cattle will harm the babies who drink it are all from ignorant or misdirected minds.

The initial tuberculin test is our first step



Fig. 5. Made from an X-ray film taken on May 14, 1928, of the chest of a girl of thirteen years. She had been exposed over a long period of time to a sister suffering from tuberculosis. This film shows the childhood type of tuberculosis in the left lung and hilum.



Fig. 6. Made from an X-ray film taken on August 26, 1930, of the same chest as seen in Figure 5. In addition to the childhood type of tuberculosis previously seen in the left lung there now appears the adult type in the right lung.

simpler the problem becomes. One can even conceive of adults today living out the natural span of life without having been infected with tubercle bacilli. This is the goal toward which we should strive for everyone of the future generations.

Despite the fact that there has been some opposition to the use of the tuberculin test as a specific diagnostic measure, the truth has it that tuberculin is highly specific and is the most dependable diagnostic measure now in existence. The tuberculin test, like other biological tests, is not 100 per cent perfect, but of all the tests it is probably nearest to perfection, and hence, deserves the full confidence of the health workers who use it. Research is still being carried on to further improve tuberculin. When applied by a trained person, it has no possibility of doing harm immediately or remotely to the individual to whom it is administered. Statements now appearing in open letters to newspapers, magazines, et cetera, to the effect that tuberculin administered to cattle affects their offspring or that it carries living tubercle bacilli to their bodies or that the

in the diagnosis of early tuberculosis in the strict sense of the word. It tells us when tuberculosis is present before any other phase of an examination is of any avail. When a physician sees a patient for the first time and applies a tuberculin test and finds it positive, if he is well informed on tuberculosis he knows that somewhere in that person's body is a focus of tuberculosis. He does not know how long the focus has been there because previous tests have not been made. Likewise, when he takes a history he may or may not obtain evidence of symptoms, such as cough and expectoration or those resulting from toxemia. If he does, all the information that he has is when these symptoms began and that information tells him practically nothing about the time the lesion developed. It is now a well established fact that a tuberculous lesion may be present for years before the slightest symptom appears and throughout those years it may have been progressing. In fact, the disease may have become quite advanced before any symptom appeared. When the physician makes the physical examination,

he may or may not elicit signs which lead him to believe that minimal tuberculosis is present. If he does, these signs give him no worth while evidence as to how long the lesion has been present. He does not know when the signs appeared nor does he know

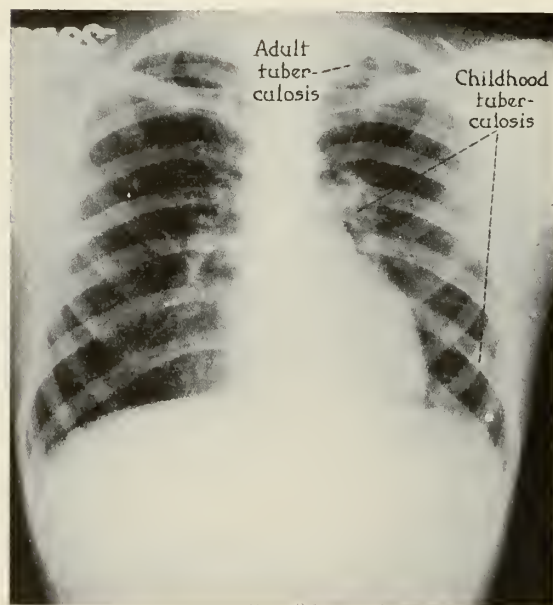


Fig. 7. Made from an X-ray film taken on July 25, 1929, of the chest of a boy of approximately fourteen years. This film shows the childhood type of tuberculosis represented by a Ghon tubercle beneath the shadow of the sixth rib and calcium deposits in the left hilum. It also shows the adult type of tuberculosis within the circle of the first rib and the first interspace on the left side. The childhood type was seen on X-ray films taken in 1923. The adult type did not begin to make its appearance in this case until 1925. Since that time it has slowly but surely progressed until a huge cavity is now present in the left lung.

how long the lesion existed before signs could be elicited, since tuberculous lesions may progress to extensive proportions without causing abnormal signs which can be elicited by physical examination.

When the physician makes an X-ray film examination, he may or he may not visualize shadows in the chest which indicate to him the presence of tuberculosis. If he does, he cannot express with any high degree of certainty how long these shadows have been present. He may talk about fibrosis, calcification, recent infiltration, et cetera, and yet from the standpoint of time he can make no definite statement. When he makes laboratory examinations of the sputum, for example, he may or may not find tubercle bacilli. If he does he has gained little or no information of value as to the duration of the tuberculous process. When he has completed the examination, if all the findings are positive—tuberculin, his-

tory, physical examination, X-ray examination, and laboratory examination—and all point to a small involvement, he is not justified in speaking of his case as one of early tuberculosis. The most that he can say is that the disease is minimal in extent. It may have been present for one month. It may have been present to approximately the same extent for many years. He does not know the length of time it has existed.

But how are we to arrive at the diagnosis of early tuberculosis? There is just one way and that is by periodic tuberculin tests of the members of our clientele from infancy or childhood on through all the periods of life. We start with the infant who reacts negatively to the tuberculin test, just as Sir Robert Philip does. We repeat the test after three to six months or at longer intervals if the physician desires. In many communities of this country now, the infant may go through the period of childhood and even adult life without ever reacting positively to the tuberculin test.

Let us say that he reaches college age, leaves his home environment, and comes in contact with tuberculous patients through the selection of a roommate who has unsuspected tuberculosis or through the care of tuberculous patients in a school of medicine. His tuberculin test has previously been negative. Six months later the test is repeated and is found to be positive. I know of nothing more certain in medicine than the fact that this young man now has a tuberculous lesion somewhere in his body. The interval since the last negative tuberculin reaction was short; therefore, the lesion is an early one in the strict sense of the word.

In all probability at this time the most careful examination of the living body known to the medical world will not reveal any evidence of the location of the lesion. It is too small to be demonstrated by our present methods of examination. The lesion is of the first infection or childhood type. It may remain so small or be located in some part of the body which lends itself to examination so poorly that it will never be demonstrated by our present methods of examination during the lifetime of the individual. Yet it is there. The tuberculin test stands alone but it merits the confidence of the physician.

On the other hand, the lesion may increase in extent and cause sufficient change in the tissues about it to obstruct the X-ray

and thus produce a shadow on the X-ray film. In other words, when the tuberculin test is first positive, the X-ray film of the chest may be entirely negative but subsequent films may reveal evidence of the lesion. Figures 1 to 4 illustrate such cases. We feel certain that each of them is an early case of childhood type of tuberculosis which will remain well under control. However, in all probability the tuberculin test will remain positive. Each of them is now a potential case of the adult and destructive type of tuberculosis. They may never develop it but the foundation is laid. Therefore, each one should be examined periodically for early adult tuberculosis by means of the

X-ray. In such subsequent periodic examinations the tuberculin test as we now know it is of no avail. Its positiveness which continues over years simply indicates the hypersensitiveness to tuberculin which the body developed when the childhood type of tuberculosis made its appearance. The X-ray will lead us to the detection of the adult type of tuberculosis when it appears much earlier in most cases than symptoms, physical signs, or laboratory findings (Figures 5, 6, and 7). But films, like the tuberculin test in the early diagnosis of the childhood type, must be made periodically if the adult type of disease is to be diagnosed early in the strict sense of the word.

THE DIAGNOSIS OF BONE AND JOINT TUBERCULOSIS*

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A tuberculous lesion exclusively confined to bone is relatively uncommon. This is because tuberculosis usually attacks the end of the bone whose anatomical relation to the joint is so intimate that joint involvement almost inevitably results. It is wrong and confusing to speak of bone tuberculosis as entirely separate from joint tuberculosis. For this reason it is practical to consider them together, and, when referring to these lesions, to use the more general term "bone and joint tuberculosis."

During the past seven years at the University Hospital, over fifteen hundred bone and joint lesions have been diagnosed as of tuberculous origin. This figure represents an average of two hundred twenty-seven cases each year, many of which are of months or years duration when first admitted. The accompanying table illustrates the anatomical location of the lesions under discussion and their frequency of involvement.

Anatomical location	No. of cases	Per cent
Spine	647	41
Hip	395	25
Knee	202	13
Foot	54	3.3
Ankle	54	3.3
Hand and wrist.....	47	2.9
Elbow	46	2.8
Shoulder	39	2.3
Other bones, such as ribs, femur, radius, ulna, etc.....	106	6.4
Total	1590	100.0

As our figures show, the extremities are prone to tuberculous infection, and since they are so readily accessible to examination it follows that previous errors of diagnostic and therapeutic omission and commission are plainly evident.

Each month we see two or three patients, who have, over their tuberculous joints, large poorly healed surgical scars containing multiple draining sinuses. They are thin, run down, anemic and feverish. Secondary pyogenic infections are firmly established. These patients have had a cold abscess or tuberculous joint widely opened and drained under the erroneous impression that the basic infection was a pyogenic one.

The object of this paper is to review the more important points which are helpful in establishing a positive diagnosis in cases of bone and joint tuberculosis.

While bone and joint tuberculosis may occur at any age its incidence is greatest during childhood and more especially between the ages of five and twelve years. During these years family contacts are

*Read before the meeting of the Alumni of the University of Michigan Medical School, June 16, 1932. From the Department of Surgery, University of Michigan.
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closest, so the presence of tuberculosis in another member of the suspect's family is of great help in diagnosis.

Exact details regarding the onset of the present illness are of considerable value, especially in differentiating between tuberculous and pyogenic infection. Following trauma, a gradual onset of stiffness limp and deformity without marked elevation of temperature, chills or other constitutional symptoms favors tuberculosis. Pain is extremely variable ranging from an agonizing type to a complete absence, and in tuberculosis of the hip, is often referred to the knee. Pott's disease may cause pain and tenderness closely simulating gall bladder trouble or appendicitis. Fleeting attacks of sharp shooting pain may occur during sleep causing the patient to cry out. A history of such night cries is of considerable significance and is more commonly observed in lesions of tuberculous origin.

Another strong link in the chain of evidence is the presence of a primary tuberculous lesion elsewhere in the body, as in the lungs or cervical glands. This finding is of great diagnostic importance and in our clinic has been present in approximately one-third of the cases.

The appearance of a tuberculous joint may in itself suggest the diagnosis. The synovial membrane is thickened and the fluid increased to such an extent that the joint is visibly swollen and appears even more so because of the severe soft tissue atrophy which takes place above and below it. Occasionally the joint cavity is markedly distended by a collection of cold abscess fluid which may have already perforated the capsule forming a peripheral soft tissue abscess. In order that the capsule may be relaxed to accommodate the increased fluid the joint is held in a position of flexion and the muscles controlling it are constantly in reflex spasm. For these reasons and also

because of bone destruction and soft tissue contracture marked deformity is often observed.

Atrophy of the affected extremity is usually quite severe and is not limited to the soft tissues. The first and most noticeable finding in the X-ray plate is the severe atrophy of the bones. This loss of calcium salts is not limited to the joint but also involves the shafts. Associated with the atrophy we see destruction of cartilage, with loss of joint space, and, if the case is advanced, destruction of epiphyseal bone without new bone formation.

We consider the tuberculin skin test helpful in that a negative test with a strong solution practically rules out tuberculous infection.

The evidence gathered from the history, clinical examination and X-ray may be so strong that the presence of tuberculosis is a reasonable inference. No matter how strong the circumstantial evidence, however, or how seemingly reasonable the inference, we always seek direct positive evidence of tuberculosis if the lesion's anatomical situation will permit. A large aspirating needle is inserted into the joint, or cold abscess if present, and fluid removed for direct examination and guinea pig inoculation. Draining sinuses are always biopsied. If no sinuses are present and no fluid can be obtained by aspiration, the joint is opened and a good sized piece of synovial membrane is removed. One-half of the specimen is sent to our pathologist, the remainder to the bacteriologist. If the pathological sections do not show tubercles it is macerated and inoculated into a guinea pig.

In order that proper therapeutic measures can be initiated with hope of success, and also to properly evaluate benefit derived from treatment we consider it essential to establish beyond a doubt the nature of the pathological process under consideration.

UNDULANT FEVER (BRUCELLIASIS)*

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The recognition of undulant fever as a common and widely distributed disease of man is largely a development of the past four years. The occasional sporadic cases which had been encountered in this country before that time were regarded as clinical curiosities; most of these were related to endemic foci of goat infection in Texas, New Mexico and Arizona. During the years 1927 to 1930, inclusive, the recorded cases number 217, 649, 1,301 and 1,385, respectively. During 1929 cases of undulant fever were recorded by state health departments in every state of the Union. While it is true that over 2,600 cases of undulant fever have been reported to state health departments during the past two years, these figures are of minimal value since they do not include the indeterminable but undoubtedly large number of cases which have been recognized as a result of confirmatory laboratory studies carried out in hospitals and private laboratories. Undulant fever is now a reportable disease in 32 states.

During the past three years the writer has investigated 128 cases of undulant fever in Dayton and the surrounding communities. These findings were the result of a determined effort to learn of the incidence of the disease in a circumscribed locality. Stimulated by a similar motive, Hardy¹ has investigated approximately 400 cases in Iowa. Carpenter² in New York, Huddleson³ in Michigan, King⁴ in New York, Bierring⁵ in Iowa, Farbar and Mathews⁶ in Indiana, Brown⁷ in Kansas, Sensenich and Giordano⁸ in Indiana, and Ey⁹ in Ohio, have conducted similar investigations in their localities; their efforts have likewise been rewarded by the discovery of a large number of cases. The inference is obvious that the disease must be much more prevalent than is generally believed.

The first recognition of the disease along the Mediterranean Coast produced such synonymous designations as Mediterranean fever, Gibraltar fever, rock fever, Neapolitan fever and Cyprus fever. In 1886, David Bruce¹⁰ isolated the organism responsible for

the infection; he named the organism *Micrococcus melitensis*. The next great advance in the study of this disease was the application of the agglutination test as an aid to diagnosis by Wright and Semple¹¹ in 1897. Some eleven years after Bruce's discovery, Bang¹² of Copenhagen isolated the causative organism of contagious abortion of cattle, which he called *Bacillus abortus*.

A British Commission, headed by Bruce, investigated the disease on the island of Malta during the years 1904 to 1907. They demonstrated that the ingestion of raw goat's milk was the common source of infection for man. The prohibition of the use of raw goat's milk by the men of the military and naval forces produced an immediate and rapid decline in the incidence of the disease. Until very recently Malta (undulant) fever was almost invariably attributed to the ingestion of raw goat's milk or dairy products derived from raw goat's milk.

For twenty-one years the *Micrococcus melitensis* of Bruce and the *Bacillus abortus* of Bang were regarded as separate, unrelated species, until Alice Evans,¹³ in 1918, discovered that the two organisms are indistinguishable morphologically, biochemically, culturally and by ordinary agglutination tests. The results of further studies led Evans to state that the two organisms probably possessed similar pathogenicity for human subjects. In 1927, Carpenter¹⁴ recovered an organism indistinguishable from *Brucella abortus* from the blood of ten human beings with undulant fever; five pregnant heifers inoculated with these cultures promptly aborted. These observations of Evans and Carpenter have been confirmed by many workers throughout the world. It is now known that the organism which produces contagious abortion in cattle and other

*From the Diagnostic Laboratories of the Miami Valley Hospital, Dayton, Ohio.

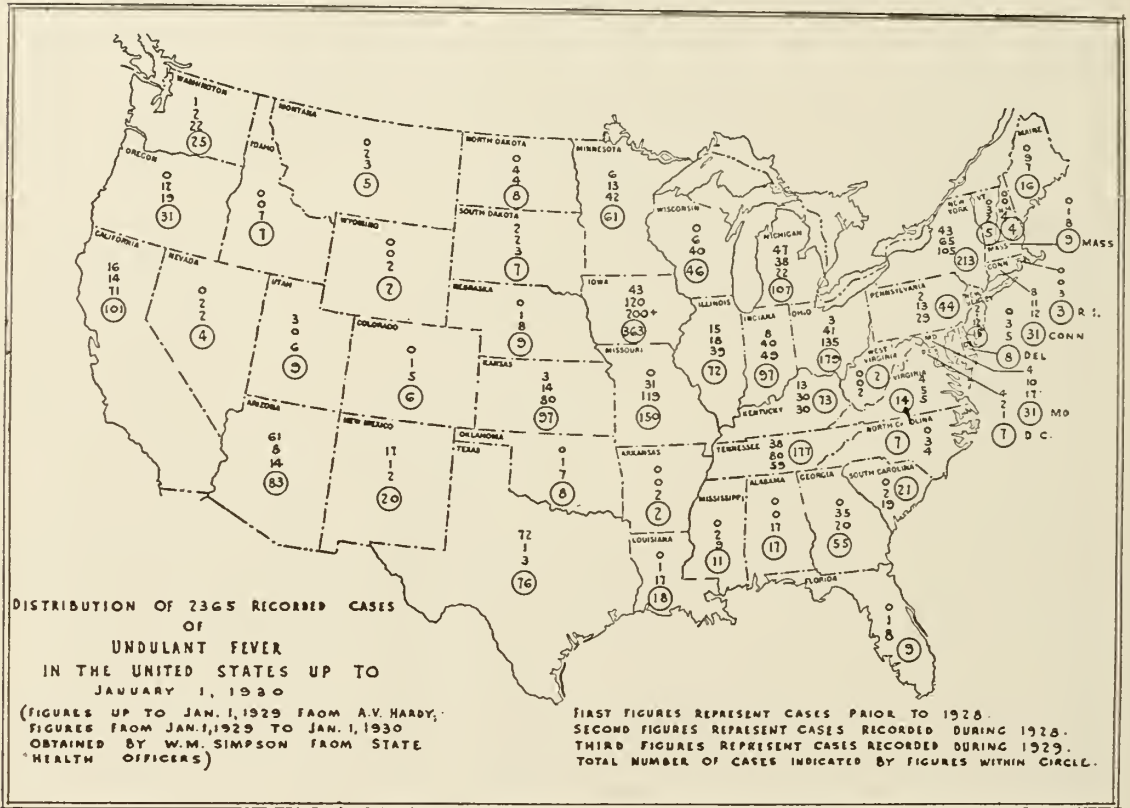
Presented before the Medical Section of the Michigan State Medical Society, Pontiac, Michigan, September 23, 1931.

†Dr. Simpson is Director, Diagnostic Laboratories, Miami Valley Hospital, Dayton, Ohio; was formerly Senior Instructor in Pathology, University of Michigan; awarded gold medal by American Medical Association for exhibit of studies in Tularemia, Minneapolis, 1928; awarded gold medal (Ward Burdick Research Award) for investigations of Tularemia and Undulant Fever by American Society of Clinical Pathologists, Portland, Oregon, 1929; President, American Society of Clinical Pathologists, 1932-1933.

domestic animals is capable of producing in human beings a disease clinically and bacteriologically similar to the Mediterranean type of Malta fever.

It became apparent that the *abortus-melitensis* group of organisms should be reclassi-

caprine types have been recovered from cow's milk. In the light of present knowledge it seems desirable to refer to all of the varieties as the *Brucella*. Furthermore, the confusion resulting from the many names which have been used to designate the dis-



fied. Meyer and Shaw¹⁵ proposed that the organisms of this group should be designated by the generic name *Brucella*; this suggestion has met with universal approval. It is generally accepted that there are three important varieties of *Brucella*. The organism usually associated with infection in goats is called *Brucella melitensis* variety *melitensis*; the organism of contagious abortion of cattle is usually referred to as *Brucella melitensis* variety *abortus*; the organism ordinarily found in swine infections is designated as *Brucella melitensis* variety *suis*. The *Brucella* exhibit marked pleomorphism; coccoid and bacillary forms, as well as intermediary oval forms, are commonly observed. Attempts to divide the organisms of the *Brucella* group into distinct caprine, bovine and porcine varieties have not been uniformly successful. Organisms which have been designated as porcine or

ease caused by *Brucella* in animals and man would be overcome by the adoption of the single designation *Brucelliasis*.

Among urban populations the disease appears to be chiefly transmitted through the raw milk of cattle infected with the *abortus* variety of the organism. Of the 128 cases of undulant fever studied by the writer, the ingestion of raw milk containing the organism of contagious abortion of cattle was demonstrated to be the source of infection in the great majority of instances; these findings are corroborated by the investigations of Carpenter, King, Orr, Huddleson, Barbar, Mathews, Sensenich, Giordano, Ey and others. Hardy, who has conducted extensive studies of the disease in Iowa, expresses the belief that direct contact with infected cattle and hogs has been responsible for a great number of cases of undulant fever occurring in that State. Hardy's in-

vestigations lead him to the conclusion that the *abortus* and *suis* varieties of the organism are about equally responsible for the undulant fever morbidity in that State. Hardy¹⁶ has demonstrated by animal experiments that the skin may act as the portal of entry of the organism. Otero,¹⁷ of Porto Rico, has reproduced the disease in human volunteers by inoculations through abraded skin. It is apparent, therefore, that there are two important sources of infection for man, namely, the ingestion of raw milk or unpasteurized dairy products containing the *Brucella*, or direct contact with infected fresh animal tissues.

CLINICAL MANIFESTATIONS IN MAN

Because undulant fever presents many symptoms and signs common to typhoid fever, malaria, tuberculosis and influenza, it is frequently confused with these diseases. Many physicians have arrived at a tardy diagnosis of undulant fever only after repeated negative Widal reactions, the failure to demonstrate the malarial plasmodium, and the inability to elicit physical signs or roentgenographic evidence of tuberculosis. Less often, the disease has been confused with acute rheumatic fever, subacute bacterial endocarditis, bronchitis, pyelitis or tularemia.

As a result of the more extensive studies which have been made during the past few years, it has become increasingly apparent that a majority of the cases of undulant fever present a more or less characteristic clinical picture. The disease appears to occur predominantly among males, particularly in rural districts. Young and middle-aged adults are most often affected. Children appear to possess some degree of immunity to the disease; ten per cent of the patients in the Dayton series of cases were children in the first decade of life.

The incubation period has been found to vary from five days to three weeks; the average incubation period is two weeks. The prodrome is not unlike that of any general infection, although in occasional cases the disease is initiated with a chill and a rapid elevation of temperature to 103-105° F. Ordinarily, the patient becomes gradually aware of an afternoon or evening rise of temperature, associated with chills, nocturnal perspiration and marked weakness. The fever, chills and sweats usually pursue a

characteristic course. The patient usually feels quite well in the morning, particularly in the early stages of the infection. As the daily elevation of temperature develops, usually during the afternoon or evening, the symptoms return. The nocturnal exacerbations of fever occasionally reach great heights (106-107° F.). The average maximum fever is 103° F. There is often a remarkable disparity between the subjective sense of feverishness and the extent of fever as registered by the clinical thermometer; in many instances the patient does not complain of fever nor does he present a febrile appearance, but the physician finds, to his great surprise, a fever of 102 to 103° F. As the fever abates, chills and sweating occur. If defervescence is rapid, the perspiration is more likely to be of a drenching character. The chills are sufficiently severe to be regarded as true rigors in about one-third of cases. There has been no history of chills in about 10 per cent of patients who have experienced fever and sweats.

Marked restlessness and insomnia usually accompany the nocturnal febrile exacerbations. Delirium occurs in some cases in which the fever reaches great heights. Ordinarily, the mental state remains clear during the febrile course of the disease; the so-called "typhoidal state" is rarely, if ever, observed.

The matutinal remissions and the nocturnal exacerbations of fever may last from one week to several months. The name "undulant fever" refers particularly to recurring relapses of fever. Such febrile relapses appear to be the exception rather than the rule in the recently described American cases; most patients have experienced but one febrile period, lasting from one week to several months, and finally reaching the normal level by lysis.

The essential gastro-intestinal complaints are anorexia and constipation. The degree of constipation appears to parallel the severity of the infection. Diarrhea is of rare occurrence.

Loss of weight is an almost constant feature of the disease. Patients experiencing a severe infection will often lose from twenty-five to fifty pounds in weight.

With the exception of fever and the presence of the stigmata of weakness and loss of weight, there is often a remarkable absence of positive physical findings. The

spleen is palpable in about one-third of the cases. Tenderness or pain of the joints, or muscles, or both, is likewise observed in about one-third of the cases. The presence of migrating pain in the larger joints has led to confusion with acute rheumatic fever. No permanent impairment of the joints has been observed.

Abdominal pain is a prominent complaint in about 12 per cent of cases; this is most common early in the course of the disease. The pain may be generalized or confined to any one of the abdominal quadrants. In one instance, reported by Bowers and the writer,¹⁸ gangrenous appendicitis developed as a complication during the third week of illness. There are many instances on record of needless, and perhaps harmful, surgical intervention in cases of undulant fever in which the abdominal symptoms were a prominent feature of the disease.

Symptoms referable to the genito-urinary tract have appeared in some cases. There is evidence that the organism occasionally exhibits the same predilection for the genital tract of human beings that it does in cows or bulls. Painful swelling of the testes occurs in about 10 per cent of cases. This complication is usually transient, but in occasional instances, suppurative orchitis and epididymitis have occurred. In one case reported by the writer,¹⁹ *Brucella abortus* was recovered from a draining sinus tract which extended from the globus major of the epididymis through the scrotal wall.

There is some evidence that *Brucella* infection may be a factor in certain cases of abortion in women. The literature contains many reports²⁰ of human abortion occurring on farms where contagious abortion of cattle was common. Kristensen²¹ isolated the *abortus* variety of the organism from the exudate which covered the uterine site of the placenta of a seven month human fetus. Carpenter²² has recovered the organism from the tissues of a human fetus which was aborted at the end of the fourth month of gestation. Frei²³ has isolated *Brucella* organisms from the vaginal discharge of a woman who had aborted ten days previously. Other investigators, notably Harbinson,²⁴ Ey, and the writer, have found strongly circumstantial serologic evidence that *Brucella* infection was a factor in the production of several cases of human abortion.

A skin eruption, usually macular or

maculo-papular, is a relatively infrequent finding; the skin lesions may simulate the roseola of typhoid fever.

Hematologic studies usually yield important information. Some degree of secondary anemia, usually proportionate to the severity of the illness, is almost invariably present. The great majority of cases exhibit leukopenia, with the white blood cell count ranging from 4,000 to 6,000. A relative, and in some cases an absolute, lymphocytosis usually accompanies the leukopenia. Occasional patients with the mild form of the disease show very little deviation from the normal as regards the blood picture.

The urinalysis usually reveals the trace of albumin commonly found in febrile diseases. The cerebrospinal fluid may show slight lymphocytosis and an increased sugar content, but in most cases shows no abnormalities.

CLINICAL TYPES

Four types of the disease are generally recognized: (1) Intermittent, (2) ambulatory, (3) undulatory, and (4) malignant.

(1) *Intermittent type*. The majority of cases which have been observed in the United States fall into this group. The disease pursues a subacute course, with fever of an intermittent character; the morning temperatures vary from normal or slightly subnormal to 100° F., while the evening temperatures usually range from 101 to 104° F. The average duration of this type of the illness is from three to four months.

(2) *Ambulatory type*. Approximately one-fourth of the cases are characterized by a relatively short and mild illness. Many persons in this group will remain at their work although aware of the existence of mild fever and a marked sense of weakness. The symptoms and signs of this form of the disease are essentially the same as in the intermittent type, except that they are much less severe. Such cases are frequently confused with influenza.

(3) *Undulatory type*. This form of the disease is characterized by the occurrence of relapses. This feature of the disease was said to be of frequent occurrence in the Mediterranean cases, but has been present in only about 15 per cent of the cases which have occurred in this country. The successive relapses usually decrease in intensity and duration. Such cases usually pursue a

more chronic course than the other forms of the disease. Physical and mental deterioration is more commonly observed in the undulatory form of the disease than in the other forms.

(4) *Malignant type*. This form of the disease is rare, having occurred in only about 2 per cent of the cases reported in this country. A sudden onset, an acute course with extreme hyperpyrexia and a fatal termination in the majority of cases are the characteristics of this unusual form of the disease. The duration of this type of the disease is usually from one to three weeks.

DIAGNOSIS

If undulant fever is given consideration in the differential diagnosis of all cases of febrile illness, especially in those in which the diagnostic criteria for typhoid fever, tuberculosis, influenza, malaria, chronic bronchitis, pyelitis, rheumatic fever or bacterial endocarditis are not convincing, the disease will be recognized with much greater frequency. This is true in cases of vague mild febrile disease as well as in those in which the clinical manifestations of undulant fever are more clearly defined. In such cases it should become an established practice to submit 4 or 5 c.c. of the patient's blood, collected exactly as for the Wassermann test, to a laboratory equipped with the proper antigens, for the agglutination test. The rapid macroscopic agglutination method of Huddleson²⁵ is a simple and reliable procedure.

Antiabortus serum agglutinins may appear as early as the fifth day, but in most instances they appear sometime during the second week of illness. It is, therefore, unwise to collect the blood specimen for the agglutination test until a week or ten days after the onset of illness. In occasional cases agglutinins will not appear until the third or fourth week of illness. The agglutination titer rises to variable heights during the acute course of the disease and tends to fall when the fever abates. Ordinarily, agglutination in dilutions of 1:160 to 1:1280 will be found during the fourth or fifth week of illness. Many persons will retain *antiabortus* serum agglutinins for many months or years, while in other cases they will entirely disappear a few months after recovery.

There is convincing evidence that about 5 per cent of individuals with undulant fever,

from whose blood the organism may be recovered, fail to develop *antiabortus* serum agglutinins. Furthermore, some patients who exhibit a well-defined clinical picture of undulant fever, and from whose blood *Brucella abortus* has been recovered, will show agglutination in titers below 1:80. It cannot be said, therefore, that there is any arbitrary diagnostic agglutination titer. For practical purposes, diagnostic significance is usually attributed to agglutination in dilutions of 1:80 or above. In patients in whom the clinical manifestations are strongly suggestive, the absence of agglutinins or the presence of agglutinins in titers of 1:10 to 1:40 should stimulate further serologic and bacteriologic studies. The skin test, using an *abortus* antigen, appears to be of value in differentiating the cases in which agglutinins are absent or are present in low titer.

In rare instances, subclinical *Brucella* infections have occurred in persons who have been exposed to the infection; *antiabortus* agglutinins have been demonstrated in the serums of such persons in the absence of clinical symptoms or signs of the disease. Carpenter, Boak and Chapman²⁶ have submitted convincing evidence that *antiabortus* agglutinins develop only when there has been actual invasion of the tissues by living *Brucella* organisms.

The occasional cross-agglutination of the *Brucella* and *Bacterium tularensis* should be borne in mind. Francis and Evans²⁷ have suggested that all serums from suspected cases of tularemia or undulant fever should be tested for both *antitularensis* and *antiabortus* agglutinins, unless the clinical history points definitely to a recognized source of infection for either undulant fever or tularemia. If it should develop that the *abortus* and *tularensis* titers are the same, or nearly the same, agglutinin absorption tests will distinguish between them. The writer²⁸ has found *abortus-tularensis* cross-agglutination in 16 of the 88 cases of tularemia and in 20 of the 128 cases of undulant fever which he has investigated.

Since a bacteremia is present in this disease, an attempt to recover the organism by blood cultures should be made whenever possible. Blood for cultures should be collected early in the course of the disease and preferably at the crest of one of the pyrexial waves. The likelihood of recovering the organism is greater if broth mediums are

inoculated directly; the carbon dioxid requirement of certain strains should be borne in mind.

Urinary specimens for culture should be collected through a sterile catheter. Amoss²⁹ has recently described a successful method for the recovery of *Brucella* organisms from feces.

Guinea pigs may be inoculated intraperitoneally with the patient's blood or saline suspensions of macerated tissue. Six to eight weeks should elapse before autopsy. Loss of weight, the presence of enlarged joints, enlarged testes and seminal vesicles, small whitish foci of necrosis in the enlarged liver, spleen and lymphnodes should be noted. Cultures should be made from the lungs, liver, spleen, kidneys, testicles and lymphnodes.

PROGNOSIS

Fatal outcome is rare, having occurred in from 1 to 4 per cent of reported cases; during 1929, 41 deaths were officially recorded by the United States Public Health Service as having been due to undulant fever. The importance of the disease is not to be judged by the death rate. The prolonged course and resulting invalidism make the outlook much more serious than the death rate would indicate.

TREATMENT

The most important consideration in the control of undulant fever is prophylaxis. The widespread distribution of the infection among cattle renders it difficult to control the infection at its source. While veterinarians and public health workers are striving to check the infection among animals, there appears to be but one logical method for preventing the transmission of milk-borne infection to human beings, and that is by pasteurization. Park,³⁰ Boak and Carpenter,³¹ and Zwick and Wedeman³² have demonstrated that complete pasteurization (143-145° F. for 30 minutes) will destroy the *Brucella*. The need for strict supervision of the pasteurization process is apparent. For the protection of the health of those persons whose occupations bring them in direct contact with infected animal tissues we must rely upon education and the institution of precautionary measures.

The rapidly accumulating knowledge of the widespread distribution of undulant fever has done much to focus the attention

of public health workers, veterinarians and milk producers upon the urgent necessity of eliminating milk-borne infection among human beings. Very little progress has been made in the control of the infection among cattle. While efforts are being made to control the infection at its source, all public health workers should be guided by the advice offered recently by Alice Evans:³³

"For the protection of milk consumers the preventive measure is quite obviously the same as that practiced for the prevention of other infectious diseases that are spread by milk, namely, pasteurization. Those who are able to pay the price for certified milk may take raw milk with a reasonable degree of safety, *if the certification guarantees that the milk is from an abortion-free herd*. No milk other than that so certified, or pasteurized milk, can be considered safe, for the cattle disease is widespread everywhere in the United States. It is fortunate that the preventive measure of pasteurization is so easily available."

The treatment of the disease in human beings has been essentially directed toward alleviation of the prominent symptoms. Mercurochrome, acriflavine, neoarsphenamin, quinine, and non-specific protein therapy have been advocated by several physicians. For the most part these therapeutic observations have not been subjected to adequate control and the very length of the list argues against the specificity of any of these measures.

Many observers have reported favorable results with specific vaccine therapy. The writer has prepared and utilized a *Brucella abortus* vaccine, standardized to two billion heat-killed or formalin-killed organisms per cubic centimeter, for use in the treatment of 60 of the local cases, and has distributed the vaccine to some 350 physicians in various parts of the country, with results which appear to justify its use. Comparison with a series of untreated control cases appears to indicate that the vaccine usually terminates or shortens the course of the disease and prevents recurrence. Since undulant fever is often characterized by natural remissions, the value of any therapeutic measure must be interpreted with caution.

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EXAMINATION OF THE BACK*

SOME NOTES AS TO SIGNIFICANCE OF FINDINGS

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Few cases offer more perplexing problems from the diagnostic standpoint than the chronic lame back. This is especially true of the "industrial lame back." During the present period of economic distress many unjust claims are being made against employers of labor and insurance companies. Many closed cases are being re-opened, disabilities tend to be lengthened and imaginary ones developed. Even for the specialist it is difficult at times to determine what, if anything, is wrong with certain individuals who present themselves for examination. Imagined and feigned disabilities are difficult to distinguish from actual ones, and it is often hard to differentiate the traumatic neurosis

from real pathology. As settlement of claims is based largely on medical opinion, often expressed by the patient's family physician, it is essential that his opinion be based on as accurate data as it is possible to obtain, and that every means be employed to arrive at an accurate and impartial conclusion. With

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this in mind the following technic of examination is presented together with brief notes as to the significance of some of the findings. No apology is made for discussing a subject which may seem elementary, as a similar paper was read at a recent meeting of the American Orthopedic Association.

The patient is stripped. As he stands in a natural attitude, heels squarely together, toes out and facing straight forward, the back is inspected for any obvious deformity such as scoliosis, total list, or kyphosis. A total list or lateral deviation, so-called "sciatic scoliosis," usually indicates a lesion of the sacro-iliac joint on the opposite side, either mechanical or inflammatory. It is not pathognomonic, however, as it may be present as a result of lumbo-sacral pathology or a combination of lumbo-sacral and sacro-iliac involvement. Occasionally the list is homolateral. A kyphosis at once leads to the diagnosis of a destructive lesion of one or more vertebræ, most commonly compression fracture, Pott's disease, metastatic carcinoma or neurotrophic spine. Loss of lumbar lordosis is frequently seen in acute lumbo-sacral or sacro-iliac strain or arthritis, in hypertrophic arthritis and in destructive lesions of the lumbar spine. A true kyphosis is seldom present in the lumbar region.

An increase in lumbar lordosis may be due to a developmental anomaly of the lumbo-sacral region, may be purely postural, or may be indicative of spondylolisthesis, especially if there is a history of injury.

Atrophy of the gluteal muscles is seen in sacro-iliac lesions.

Viewing the patient from the side, the general body posture and shape of the abdomen and chest are noted. A plumb line dropped from the tip of the mastoid process should fall through lines projected from the shoulder, the great trochanter and the back of the patella. If the angle of inclination of the pelvis cannot be determined accurately by inspection it is wise to measure the so-called "lumbar index," or to take a roentgenogram of the lumbar spine and pelvis in the lateral projection with the patient standing and measure the lumbo-sacral angle after the method of vonLackum. To obtain the lumbar index a straight-edge is placed against the spine and the distance from this to the apex of the lumbar hollow is measured. This is normally 30 to 40 mm. An increase in this measurement often means

an increase in the angle of inclination of the pelvis greater than the normal of 42.5 degrees and is highly suggestive of a mechanically weak lumbo-sacral joint.

Then again viewed from the back, the patient is asked to bend as far forward as possible, keeping the knees locked. Then he hyperextends the back, flexes laterally both ways and then obliquely forward and backward. If the patient complains of a unilateral low back pain he is asked to flex the spine with the knee and hip on the affected side slightly flexed. In sacro-iliac lesions the range of flexion of the spine is greater in this position than with both knees completely extended, while in lumbo-sacral lesions the range is the same in either position. During these motions we observe general or segmental limitation of motion, fibrillary muscular twitching, and ask the patient to designate accurately points where pain is felt. These are marked with a skin pencil.

While the patient is standing there is opportunity to observe the posture of the feet and to look for varicose veins.

The patient is then asked to sit on the examining table. The same motions of the spine are then carried out as in the standing position. In sacro-iliac lesions acute flexion in this position will not be limited as in the standing position, as the hamstrings are relaxed, whereas in lumbo-sacral lesions the range of motion is the same sitting and standing.

At this point some items in the general physical condition of the patient are noted. Those which may have particular bearing on the back pathology are the condition of the teeth and tonsils, tenderness over the frontal sinuses and antra, cervical adenitis, the blood pressure, the reflexes, and the condition of the joints of the extremities, especially the presence of deformity such as Heberden's nodes, limitation of motion and crepitation. Any gross abnormalities in the lungs and heart are noted and the chest expansion measured. In such conditions as ankylosing spondylitis, limitation of rib excursion with respiration is a common and early finding.

Then with the patient in the dorsal prone position the abdomen is examined for kidney, gall bladder and peri-cecal tenderness and for fecal masses in the colon.

In this position the patient's thighs are flexed with the knees extended. Unilateral

limitation, or, in other words, a unilaterally positive Kernig sign, indicates sacro-iliac pathology. It is due to sciatic irritation and spasm of the flexor muscles of the thighs. It is to be recalled in this connection that the sciatic nerve arises from several lumbar as well as sacral roots and that lesions in the lumbar spine often produce sciatic pain, and a positive Kernig sign.

The hips and knees are then flexed at the same time, the patient being assisted in this motion by the pressure of the right hand of the examiner against the patient's knees. The examiner's left hand is placed beneath the lumbar region. If the patient complains of pain in the back during this test an attempt is made to determine whether the occurrence of pain coincides with the flexion of the lumbo-sacral joint.

Outward pressure against the anterior superior iliac spines theoretically tends to separate the symphysis pubis and the sacro-iliac joints and produce pain in the latter when a lesion is present. Likewise, lateral pressure on the ilium, the patient lying on the affected side, may produce pain in a diseased sacro-iliac joint. In differentiating sacro-iliac from lumbo-sacral pathology, and between right- and left-sided lesions, Gaenslen's test is of much greater value.

"The patient, lying supine, flexes the knee and the hip of the same side acutely, the thigh being crowded against the abdomen with the aid of both the patient's hands clasped about the flexed knee. This brings the lumbar spine firmly in contact with the table and fixes both the pelvis and the lumbar spine. The patient is then brought well to the side of the table, and the opposite thigh is slowly hyperextended by the examiner, with gradually increasing force by pressure of the examiner's hand on the top of the knee. With the opposite hand, the examiner assists the patient in fixing the lumbar spine and pelvis by pressure over the patient's clasped hands. The hyperextension of the hip exerts a rotating force on the corresponding half of the pelvis in the sagittal plane through the transverse axis of the sacro-iliac joint. The pull is made on the ilium through the Y ligament and the muscles attached to the anterior superior and inferior spines. As a result of the impaired ligamentous support on the diseased side, this rotating force causes abnormal mobility accompanied by pain, either local or referred on the side of the lesion."

Then with the patient in the ventral prone position the spinous processes are palpated with the thumb, beginning at the occiput and continuing down to the sacrum. Bone tenderness leads one to suspect actual bone pathology. If localized over one vertebra, compression fracture and tuberculosis are the most likely causes. In other less common diseases of the bone, tenderness is usually present over several vertebræ, *e.g.*, multiple myeloma and metastatic carcinoma. All of the above lesions will be demonstrable by careful roentgenological study. In industrial accident cases, bony tenderness without X-ray evidence of bony injury or disease is strongly indicative of malingering.

Palpation is next carried out laterally over the articular facets and muscles. While palpating it is important to note whether tender points coincide with the pencil markings previously made. When an injury exists the tender points should correspond (with slight variation). When these points do not check up reasonably well, a suspicion of malingering may arise. The amount of pressure required to produce pain is also noted. This can be estimated fairly well by finger palpation. Accurate as our estimate of this may be, the labor boards are usually not willing to accept a physician's word as to the severity of a subjective symptom in preference to the patient's. To accurately estimate the amount of pressure necessary to produce pain, a very useful instrument has been devised by Dr. Paul B. Magnuson. It consists of "a spring scale plunger with a padded ball on the end, the pressure being recorded by a sliding ring which remains in place after a given amount of pressure has been put on the ball." If the patient complains of pain on one-half to one pound pressure, it would be reasonable to suppose that the point was very tender. If the patient's attention is distracted and it is then found that ten or fifteen pounds pressure is required before pain is noticed it may be assumed that the patient is malingering or at least that the point is not as tender as the patient claims.

The sacro-iliac joints, the attachments of the ilio-lumbar ligaments, the sacro-sciatic notch and coccyx are palpated last. Sacro-iliac lesions usually produce tenderness at the notch, while lumbo-sacral lesions do not, although they may produce referred pain to this area. In the absence of a history of

direct violence to the coccyx such as a fall on the ice, the presence of coccygeal pain and tenderness is frequently indicative of a neurosis, although lumbo-sacral lesions may produce coccygeal pain referred by way of the middle sacral nerve. An arthritis of the sacro-coccygeal joint also causes localized tenderness and pain on manipulation of the coccyx by rectum.

With the patient in the ventral prone position, acute flexion of the knees in the presence of an irritative lesion of the lumbo-sacral joint, such as an arthritis, causes the entire lumbar spine to rise from the table, so-called Ely's sign. When the knees are flexed the tension of the muscles and ligaments attached to the front of the pelvis is increased. This tends to rotate the pelvis around a transverse axis and hyperextends the lumbo-sacral joint. The muscles controlling this joint then go into action to prevent this motion and hold the spine rigid. Consequently the hips flex slightly and the lumbar spine rises from the table.

In attempting to diagnose conditions of the back and in estimating disability one

must constantly bear in mind that the structures which make up the back are frequently affected by lesions and conditions in other parts of the body. Therefore, in addition to the above examination, every back case should be subjected to as thorough study as the one suffering from some cardiac or gastro-intestinal disease. All the laboratory aids to diagnosis should be used. X-ray studies, while always indicated in these back cases, are often of minor importance in the estimating of disability. The industrial physician should therefore be a diagnostician of the highest order. Once he perfects himself along these lines many of the obscure and troublesome problems relating to industrial lame back will solve themselves easily and quickly to the satisfaction of the patient, the employer and the doctor himself.

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THE SHIP SURGEON'S CAREER

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The following paper is an account of a season's experience as ship surgeon on a transatlantic liner by Dr. Wynand Pyle of Detroit, brother of Dr. Henry J. Pyle of Grand Rapids, Speaker of the House of Delegates. Dr. Pyle relates an interesting experience. During the past few years we have printed each year travel experiences of our members who have visited unusual places or whose experiences have been out of the ordinary. The response of our readers has led us to feel that such articles, though not the kind that ordinarily appear in medical journals, are nevertheless good reading and are therefore welcome.—EDITOR.

The last week of April, A. D. 1931, found me sailing from New York as ship's surgeon on the Twin-turbine Royal Mail Ship Volendam bound for the tropics. Six weeks before, I had said good-bye to the syndrome known as overhead in my practice, starting on the sabbatical year I had long promised myself. My plans had included modest travel and some study, but my expectations had not risen to a situation such as this in which I could combine pleasure with remunerative work.

We were on the first lap of what is known as a Spanish voyage, that is, one whose chief object is to provide for the vernal migration of Spaniards and other Spanish speaking people from the Americas and Cuba to Spain for the summer months; the return voyage is made in the autumn. We were running

practically without passengers as far as Vera Cruz, our first port of call, and I had ample time to acquaint myself with the officers and the crew, and ascertain what was expected of me and what I might look for. The prospects were glowing, especially when contrasted with the cold, fortunately obsolete, regulations to which I had agreed in the Dutch Consul's office in New York. In the presence of this representative of the water scout of Rotterdam I had signed a document in which, among other things, I had waived the provisions of the Dutch law which exempted seamen from service along

the Gold Coast when pirates were known to be active there and agreed to the company's minimum allowance, if necessary, of so many grams of butter per week and that a certain amount of dried fish could be substituted for an equal amount of the meat ration.

Yes, it was clear that I might find the life endurable. A respectful steward had conducted me to my cabin, a cursory survey of which revealed two port-holes, a window-seat couch underneath them, a large fan, a swivel chair, desk, book-case, wardrobe, and an ample set of drawers built underneath the high, curtained berth. The steward asked me what hour I wished to be wakened and whether I wanted coffee or tea for the ceremony. I chose 7:30 as the hour and intimated that coffee might help me bear the ordeal of having to be aroused. Adjoining this cabin I found the doctor's private office for the first and second class passengers. Here I found a book of information for ship surgeons, giving various regulations as to medical reports, the uniform, and incidentally revealing the fact that the doctor "ranked equally with the first officer under the captain."

But I never found it necessary to assert my position. My fellow officers, though somewhat more conservative than Americans, were genuinely hospitable and co-operative. The captain asked about previous experience on the sea. When I told him that my limited experience did include a departure from Siberia on an ice breaker in mid-winter followed by a voyage in the open Arctic during the war he seemed much encouraged in the matter of the new doctor. However, he said, "If you do become seasick don't try to shame yourself into being about. Stay abed." However, I never missed a meal of the excellent cuisine for which the line is noted.

The professional activities of the day began with sick call for the crew at the hospital at nine o'clock. My aides here were two male nurses, one a man of forty years' experience, the last twenty-three of which had been spent on the sea. Most of these years had been spent serving a ship's doctor who had left the care of most injuries to him. In anything but severe trauma my position seemed to be perfunctory; at best, I acted in an advisory and controlling capacity. Even the matter of sutures was included in

the first aid rendered by him. Internal medicine, however, seemed beyond his scope; he always left that matter to the doctor. The other aide was a German Pole who had joined the line in the days when there were many Polish emigrants. He had a wide knowledge of pharmacy and spoke various languages.

Holding morning sick call was a short and pleasant office, where I learned most about the lives, thoughts, attitudes, and activities of the toilers of the sea. Much as military discipline is necessary in running a ship, I encountered little of that feature of military life known in the English army as "swinging the lead" and in the American army as "gold-bricking." I did find it occasionally among some work-their-ways in the steward service. The real rope sailors scorned to ask medical advice or to be excused from duty for lesser injuries and illnesses. They were descendants of the sailors of the days of wooden ships and iron men, and any attempt on the part of a man to soften his existence would call forth the remark, "But now we have iron ships and wooden men."

Sick call was usually completed in time to allow for a half hour's constitutional before reporting for the one part of the daily program which was attended with military precision, namely, the captain's ten o'clock conference. Here all happenings of any import that had occurred in the preceding twenty-four hours were brought up by the heads of the various services. Here are reported serious and likely to become serious illnesses and injuries. The instructions received never intruded into my work, but there was always the attitude on the part of the skipper that he wanted to know what was going on in my service as well as the others. Though the captain's ruling on any matter could be absolute, it never went beyond the hint not to be hasty in the matter of putting a sick man ashore for hospitalization or operation at an out-of-the-way port, or having to explain the necessity of sending a man home to Rotterdam by a more direct voyage than ours. At the captain's call I learned in due time that when a stowaway is found aboard the ship, the personnel of the department in which he is found, as well as the captain and the navigation officers, lose their sea pay known as premium.

I have always thought of the term "getting one's sea legs" as being a figure of

speech. After six days out I learned that the least that can be said to the contrary is that the expression has its origin in a definite pathological entity. I learned that it was one thing to spend a voyage lounging in a deck chair, leaning on the rail, and taking brisk walks, and another to keep one's balance while carrying on such duties as peering into and treating a throat and other matters of professional routine. Hitherto little used muscles had been brought into a state of tonus and I found myself walking around with a gait and posture seen in the tender-foot the day after a horseback ride. The disability was complicated by the appearance of an edema of the tissues around the joints, brought on apparently by a perfectly calm day in the Gulf with the thermometer in the high nineties and the air dripping with warm mist. Since that time I have often been called upon to reassure Northerners on winter cruises in the tropics that they were not being attacked by a crippling arthritis when these alarming joint symptoms appear.

As we approached Vera Cruz I got my first hint of the most important phase of a ship surgeon's duties, namely, the contact with port authorities. I was asked to sign a series of statements referring to the physical health of the passengers and crew, some further statements as to the sanity of all on board, ending with a solemn affirmation that there were no prostitutes on the ship.

Another important function of the doctor is to control the matter of sick persons coming aboard, not only because of the menace of infectious disease to the health and peace of mind of passengers and crew, but to avoid difficulties with officials at ports of call, and most of all to avoid the formalities necessary in case of a death. Due to the fact that King Alfonso had just abdicated the throne of Spain, making that country again a healthy climate for many expatriates, an unlooked for number of passengers poured aboard over three gang-planks at Vera Cruz and Havana. Moribund and infectious cases might easily have escaped the notice of the new medico. Before sailing I questioned a cachectic old gentleman, barely ambulant, about his general health. Yes, he was afflicted with stomach trouble, but he was much improved now; he was to finish his convalescence with a vacation in Spain. After sailing I learned from his friends aboard ship what the Mexican physicians

had seen fit to tell them, that the man was a victim of an inoperable carcinoma.

Another passenger who escaped my notice until we were safely out at sea was a woman whose general appearance did not need the eye of a physician to note that she was very near term. In spite of the evidence, the passenger department would probably not have supported very heartily my turning her away at the gangplank. Furnishing child-bed care for healthy multiparæ was a commonplace in the transatlantic service in the pre-quota days. There was space in the doctor's journal providing for the listing of a dozen births. My old nurse told of having cared for nine mothers in the steerage within thirty-six hours. What had happened, of course, was that one normally begun labor had excited sympathetic pains in another mother, she perhaps in two more, and so on until everyone in steerage anywhere near term was delivered.

This incident serves to remind me that one cannot escape all the evils of a professional existence on shore by running away to sea as I did. Least of all did I suspect that the evils of the free clinic would be found aboard. When the lady came above deck after leaving Havana and I saw the unmistakable evidence of the impending event, I sent my polyglot nurse to see if he had a tongue in common with her and to collect a few important dates for me. He returned with the information that even she expected the event within a few days, and that it had not discouraged her embarkation at all. In fact, it had encouraged it. For her previous confinements she had had the services of midwives; if the passage money included hospitalization and the services of a doctor when necessary, why should she not avail herself of them? So here was the doctor facing the possibility of starting his Sabbatical year working in the ungrateful branch of the practice of medicine from which he had hoped he had escaped forever. Oh well, there was still a chance that the young Pole would arrive in Europe *in utero*.

However, by way of being prepared for the occasion I inspected the labor room. The Volendam, while not the largest of liners, was but seven years old and modernly equipped. There were sterilizers of all sizes, drum after drum of sterile dressings. An inspection of the instrument cabinets re-

vealed instruments for obstetrical complications from the commonest to the rarest.

The inspection opened my eyes to the entire matter of medical equipment. Besides the labor room, the hospital provided a ward for men passengers, another for women, still another for the crew, and an operating room. On the deck above were two isolation rooms and two rooms for mental cases. There were splints and dressings for all emergencies, and a supply of drugs that would put to shame many an American sandwich-shop—alarm-clock—bazaar that specializes in prescriptions. Besides those bearing Dutch and Latin labels, there were many drugs with Spanish labels, and again, many which bore the typically British nomenclature. Apparently every country's medical requirements were being met. One reason for this, no doubt, is that the lines must comply with the shipping laws not only of the country under whose flag the ship is sailing, but of each country from which it takes steerage passengers.

So both by way of complying with the law and further to serve properly the Spanish folk whose numbers dominated the passage, the ship had gone Spanish. The Dutch and English signs over doors and passageways had been replaced with signs in Spanish. The touring and third-class had Spanish cooks and Spanish cookery only. In the first-class there was both Spanish and French cuisine, with the menu printed in both languages. Our radio newspaper came out in Spanish, and on the passenger list I found myself listed as Don W. Pyle, medico abordo.

The voyage became an opportunity to observe a cross-section of Spanish life. Senors, senoras and senoritas in the first-class spoke a language enriched with gestures and facial expressions making it almost intelligible to one who did not know its words. At dinner Spanish shawls and high combs were seen among the somber habits of those in mourning for relatives who had passed away years ago. In the tourist class we saw somewhat humbler and less picturesque folk. And in the steerage the gringo medico's ideas grown out of the doctrine that all men were born free and equal underwent much revision. I saw peon families squatting on the deck as though it were native heath, eschewing the orderly table set for them and enjoying a dish of cooked potatoes from which they each picked and ate as though

they were apples in a basket. One can imagine what the proverbial Dutch cleanliness suffered in the other phases of the life of this submerged tenth as they lived and moved and had their being.

The two American passengers who had taken this roundabout way to Europe against advice were having an opportunity to observe Spanish life on the inside such as they as Americans could never get in Spain itself in twice the length of time. Except from these two, and from the author of a famous post-war novel who came aboard at Havana, I did not hear my native American language. Through the Spanish conversation there filtered a little English from the Dutch officers, Dutch from the crew, some Polish, Yiddish, German, French, and some English from South American Englishmen, but Spanish sounds and gestures filled the air.

On the third day out from Havana my dinner was interrupted by a message from the hospital steward. The Yiddish wails coming from the labor room as I approached the hospital told me of the progress of events. A stewardess was already there, giving neighborly assistance, and the male nurse was presiding as a male midwife. I assured myself that position and progress was normal and took my station in a deck chair in the adjoining room and religiously observed all the injunctions against meddling midwifery that Nathan Jenks had browbeat into the senior medical students of my time. In a few hours a lusty neonatoric cry told me of the addition to our passenger list. I took up and finished the recessional from there and left the lady enthroned on the labor bed with instructions that her wants in the matter of food and all comforts be supplied from the first-class to her utmost wish. I fell in with the attitude that to the victor belong the spoils. The lady had won.

I sent the Polish nurse to the bridge with the news of the event so that the necessary observation of latitude and longitude might be made. The fellow could carry more of wit and drollery under a perfect veneer of military courtesy than anyone I have ever seen. The first officer, who was on duty at that time, told me the next day how the man had transmitted my message. He had clicked his heels, saluted, and said, "I have a report from the doctor, sir." "Yes, what is it?" "The doctor has found a stowaway aboard, sir." Visions of losing the premium of a four-week voyage nearly caused the

officer to jump off the bridge besides rehearsing all the expletives he had learned in his nautical career. When he heard the more scientific explanation of the find his relief was so great that he laughed joyously as the nurse again saluted, clicked a snappy about-face and departed in solemn military manner.

News of the birth spread through the ship rapidly and maternal interest was all agog. When the expectant father and mother had been asked for a layette they had sadly iterated that they were poor and that they had none at all. So the ladies bountiful aboard came with gifts of clothes skillfully made over from garments that could be spared. Not until we approached Rotterdam did the prenately provided layette come to light out of the depths of the patient's own luggage.

The elderly senior who had hoped to see his native Spain before he died, and a babe in arms who had come aboard suffering with an enteritis, which is not uncommon among children in the tropics, succumbed before we reached port. The bodies were cared for according to regulations internationally accepted for cases where burial at sea is not carried out. They were imbedded in sawdust soaked with a solution of bichloride of mercury and were laid in metallic coffins which were then hermetically sealed with solder. The Spanish doctor who was aboard in compliance with Spanish law protecting its citizens traveling third-class offered to embalm the body of the senior if the friends of the deceased desired that service. This seemed peculiar to me and excited my curiosity sufficiently to invite a discourse on the subject, each of us using worse than broken French, the only lingual meeting ground we had. It ended with my being convinced that being embalmed by a member of the medical profession is another old Spanish custom—new to me.

Landing at Vigo, our first port, satisfying the official dignitaries of our fitness to pass quarantine was attended with proper Spanish eclat. Our passenger list was large and varied as to class and condition. Besides the usual group of Spaniards in business in the Americas there were those who had been political refugees and also those who would rather suffer unemployment in their native Spain than in the new world, and finally merchants who believed that there might be good fishing in troubled political waters. At

the last and chief port, Santander, we were very rigidly inspected. We had carried nearly eighteen hundred in passengers and crew, circumstances under which we could be suspected of having fallen short of meeting the regulations. I was asked to conduct the chief of the Spanish sanitary service through my hospital. His attitude at first did not impress me as being generous. I was asked to produce various instruments by way of checking our equipment as his assistant named them. It required rapid cerebration, for instance, to catch the Spanish term for intubation set and find a Dutch, French or German term for it by which the hospital stewards could recognize and produce it before we were marked zero on that part of the examination. However, after I had led him through all the rooms reserved for the Spanish citizens traveling third-class who might become sick he beamed his gratification and uttered an approving "muy bien." The ship's brown cat crossed our path just then. Glad of an opportunity to change the subject without appearing abrupt, I called his attention to the "*gato obscuro*" with mock nonchalance. Had it been another animal and another color the subject would have been outside of my Spanish vocabulary.

Leaving this last port of Spain, we passed the palace of the erstwhile Alonzo. I had learned the Spanish words "*se alquila*" by seeing so many "for rent" places in Havana. I gestured towards the castle as I repeated these words to the Spanish doctor, who was sharing the rail with me. He managed to tell me with Spanish vehemence that soon this building and its grounds would be a park for the poor and that he was looking forward to the moment when he might rip the crown insignia from his uniform.

Our next port was Plymouth. At British ports the letter of the law is carried out. Here the quarantine officer will not board the boat until he sees the ship's surgeon at the gangplank. I found it a pleasure to deal once again with a medico who spoke English, the more so when I found that he had served in the North Russian expedition during the World War. We did not have to fill the occasion with remarks about the present weather. The British rules, while exacting, allow for excellent coöperation; for instance, their ports are the only ones where quarantine and customs officers will meet ships at any time of the night. The

courtesies of the occasion include an order on the bar, but rarely are cocktails or wines called for. The opportunity is seized to have Dutch beer, which they admit has a surpassing flavor. The technicalities met, and the documents handed over, our chat ends when the whistle warns of the tender's departure. We exchanged cheerios and the doctor and the purser's staff returned to their cabins while the channel crossing to Boulogne is made and resume their interrupted sleep. At the French ports little is exacted of the ship doctor. It suffices to have ready in the purser's office a signed statement to the effect that there is no cholera, yellow fever, or bubonic plague aboard.

A few hours more and we reach the shores of Holland, where we proceed cautiously up the large sea canal and into the Meuse, hoping that if we land near midnight it will be after midnight so as to draw another day's sea premium for an infinitesimal bit of time on duty. Here, too, the formalities with officialdom are few. The American doctor on the Dutch steamer ceases to be a doctor when the boat ties up at the pier. He does not dispute the point. Medical responsibility for the ship is turned over to the company's medical staff on the piers. The doctor's journal of the voyage is turned in, his base pay goes on plus two gilders a day, officer's food allowance, and if he leaves his address he is free to roam the dikes or to take a jaunt to Paris. My first layover gave me ten days near the end of the tulip season in Holland. The others were but of scant five days long, with the exception of a sixty-day layover which fell to my lot in the autumn.

We now began the regular service. The officers congratulated me for having survived the Spanish trip as a novice and assured me that if that crowded voyage had not discouraged me life would be pleasant henceforth. The passenger list was small and made up chiefly of business folk, mostly Americans. For two months I had been hearing everything but American pronunciation and intonations; I could feel my ear drums relax with relief from the strain.

My contact with American officialdom at New York revealed the desirability from the line's point of view of having an American doctor as ship's surgeon. Through the years in which the lines were bringing immigrants of all sorts to the United States the system of documentation and defensive in-

spection developed. The matter of contact with medical authorities was considerably smoothed by having an American doctor deal with American doctors. Documents to be made out and signed are voluminous, the inspection is rigid, but it is all carried out in a spirit of reasonableness that delights the personnel of the purser's office, on whom all the formalities fall.

As we entered New York harbor I found myself with other Americans watching the shore with that native land feeling. I realized that they were coming to stay and were looking forward to the prospect of happy days at home. I was experiencing a bit of regret at the prospect of setting out again. But as I approached the pier that night, after an evening on Broadway, and saw the large white decks of the Volendam I realized that there would be a greater pang if she were to sail without me. I found the days in New York hot, the air stifling. I was glad when we again could put out to the healthful sea.

The happiest feature of the New York layover was the fact that here the officers all sat at one table. At sea each of us had his own table at which he played host. In New York I could listen in on the Dutch officers talking with each other. I found their discussions on world affairs and their views delightful. There was a revelation of broad basic education and understanding, a conservatism, and, most of all, a freedom from idle or frothy patriotism. Holland is well aware that it must buy the world's goods and sell its own products to the world. She believes in doing all she can to understand other nations and freely educates her youth in this spirit. At an early age they must learn English, later French and German. She says in effect, "We are a small country; proud as we are of its past history and of its culture, we do not expect the world to learn our language when it wishes to deal with us."

Among the implied duties of the surgeon on passenger ships generally is the matter of being host, or, at least, of extending hospitality in his contact with the passengers. The line which I served had no definite instructions or formulated rules, but all officers understand that they are expected to be at their respective tables regularly. On the other hand, we felt that the line would rather have us be intent on our separate responsibilities towards the ship than to qualify in the hail-

fellow-well-met milieu of the smoking-room. Beyond this the matter was left to the captain of the ship.

In this connection I found my position presenting some unexpected phases requiring some adjustment. The doctor is the only American officer on board, and the Americans, who admittedly form the valuable majority of passengers, soon turn to him as *entre preneur* in their relations with the ship. I had to guard against becoming a busybody, coming continually with requests to my fellow officers about matters strictly within their own departments. I learned to answer these requests from Americans by referring them to the proper officer, saying that the officer was very approachable, as indeed were all my fellow officers. Mr. Ernest Hemingway, who was the delight of my table on one voyage, overheard my answer to some such request in which I intimated that I was loath to meddle in the other fellow's department. "I suppose, doctor," he said, "that if I should see a rat and could prove that he was actually infested with the flea that carries the bubonic plague, it would be a proper matter to take up with you." To which I replied that if his observation of the rat, the flea and the microbe gave promise of the latter meeting the requirements of Koch's postulates his case would be strong and would have my heartiest attention.

This same unique position of the American doctor on the Dutch liner calls for another point of being on guard. Americans on board have an attitude towards festivity in general, often engendered by the release from getting their champagne and wines through illegal channels. Into this the American officer, with apparently much leisure, is invited. All of this is well enough for the passengers making a single voyage. But to join in this spirit of pleasure bent will not do for a series of voyages. I soon learned to assume a teetotaler attitude, eschewing fine wines which might grace my dinner and avoiding the invitation for preprandial liqueurs in the smoking-room.

Except for the matter of occasionally having to isolate fevers, little is asked in the matter of sanitation as in the army. In the first place, Dutch cleanliness does not need an American doctor's enforcement. Further, ship sanitation has been for years a matter of international regulation, and all officers are well grounded in it. There is international provision for the treatment of

venereal disease and the prevention of its spread. There are hospitals in various ports where a sailor of any nationality may receive free treatment. The crew is inspected on the company's piers before each sailing from Rotterdam and before landing in New York. In none of the sixteen sailings on which I served the *Volendam* did I find any venereal disease. In fact, I found the term "drunken sailor," or the idea of the sailor as a patron of the brothels, obsolete, on my ship at least. Most of our sailors were husbands and fathers, a type that on land would be spoken of as industrious, good citizens.

Except in the case of continued rough weather *mal de mer* is not the chief ailment for which the doctor is called. Seasoned voyagers are often victims, and many of them have long ago despaired of relief. These and many of the novices think of seasickness as a natural concomitant of the voyage. All the cases called seasickness do not fall into one class as to etiology. After some observation of the symptomatology one learns that the rush, farewell entertainment, disturbance of regular eating habits are causes of nausea that may set in the day after coming aboard. In many cases mere apprehension seems to initiate nausea and vomiting, and in still another group the temptations of the menu and the hospitable urgings of the table steward result in unguarded indulgence not compatible with an existence which is not continuously one of perfect horizontals and perpendiculars. Besides all these there is, of course, the horrible clinical entity in which even the mere raising of the head from the pillow causes all the furniture to reel and which causes the victim to implore to be put off at the first port, wherever it may be, from which he will never get on a ship again, even to take himself home.

I never resorted to opiates except when a chronic disability or a concomitant illness warranted the patient's being spared the horrors of *mal de mer*. I found that the drugs of the barbituric acid group gave relief in sleep only to have the symptoms return during the waking hours. The steerage passengers, whose open deck space was near the hospital, often called on my old nurse. He always prescribed a glass of beer to be taken slowly. I made it a point to observe the subjects of his advice, both before and after taking. I found too many of them

happy on the deck within a few hours after taking the cure to sniff in scientific scorn at his empiricism. Not forgetting that *post hoc* is not necessarily *propter hoc*, I introduced the humble beverage into the sick room of the first-class, often with results that made the patients fairly sing their gratitude.

Naturally I speculated as to what element of the brew was responsible. Was it the carbon dioxide in solution, the alcohol, or the bitter principle? My experiences with those passengers who had tried champagne had not satisfied me that even the goodly percentage of both alcohol and carbon dioxide in that beverage was very effective. The same seemed to be true of non-alcoholic carbonated drinks and of uncarbonated alcoholic mixtures whether diluted or "straight."

This lead me to experiment with bitter drugs. I found that often a few half-drachm doses of the compound tincture of gentian held in the mouth as long as possible before swallowing dispelled the nausea. Later I obtained some *anthemis nobilis*, a bitter blossom that is easily retained in the mouth and chewed. I used these last two measures in the cases where there was an acquired antipathy to beer and where I might be suspected of shifting my professional obligations to the bar stewards. I admit that all the requirements of a scientific investigation were not met in my experiments or my conclusions. Clinically, I found that the most satisfactory approach to the matter was this prescription of "bitters held in the mouth," and warning against the use of coffee and tea, especially with sugar or cream, between meals.

It was my good fortune never to encounter indications for major surgery on my voyages. Basing my management on reports of how such conditions had been met on other ships I would have met such a situation on the Volendam by impressing the doctors of medicine among the passengers into an operating room staff of nurses as well as surgeons. Had I ever wanted consultation I am sure that I could have found an average assortment of specialists aboard on any one voyage.

One unofficial duty which slowly gravitated towards me was that of editing—proof-reading, if you like—the subject matter published in the ship's daily newspaper in which the news received by radio is

printed. Carefully as this is taken by the radio operator, it is the duty of the purser to prepare it for publication. The vernacular of the bleachers used in reporting baseball games was beyond him. Even in its best form it makes no sense for one whose basic instruction in English was gotten from insular sources. So the American's advice on the presentability of the phrases such as "died on second," "lifted the pill," was eagerly sought and accepted. Later the baseball news was turned over to me entirely and I assumed the title of sport editor of *The Ocean Post*.

Now, in the eyes of the Dutch officers, an American doctor may be a good physician and in many respects a scholar, but, for the reasons just given, his opinions as to what is correct English are viewed in the spirit of "English spoken and American understood." It was only after I had called their attention to some incongruities in their text and had backed up my criticism by references to Webster's Unabridged that I was allowed to pass on the language of the entire sheet.

With the coming of the winter cruise season the objectives of the passenger service are changed, producing a change in the life and atmosphere of the salons. On the transatlantic voyages there may be hilarious groups among the more sedate passengers; on the short West Indies cruises the spirit of whoopee descends on the ship. The drawing-room decorum which is found in many phases of the summer voyages is banished by the pervading spirit of a beach party. Every night is party night. A bathing-suit is proper attire on any part of the ship. The most is made of the opportunity for ultraviolet. The ship's own musicians, whose classical strains always called me to decorous dressing for a decorous dinner, are replaced by an American gipsy jazz band which calls me to a noisy dinner in a dining-room bedecked with colored streamers. I wonder what color confetti will land in my soup tonight. I hope it won't be green. Perhaps I had better take thick soup; it is not so good a solvent for the foreign bodies. Tonight there will be a pajama parade headed by the jazz band playing "Mamma don't want no peas, no rice, no coconut oil." Tomorrow, I know, the doctor's office will not serve for a consultation hour. There will be the great American trek as to a drug store for over-

the-counter aspirin, soda bicarb, argyrol and laxatives. I decide that I would again enjoy the quiet of the street-cars and the automobiles and the shrieking newsboys on Woodward Avenue.

The Volendam sails on her next cruise without me. I had never tired of watching the tugs nose her into position. Now I watch them from the pier instead of from my favorite place at the stern. I know what commands are being sent from the bridge to the engine rooms. I visualize the engineer at his post, and his adjuncts, one at each turbine control. I exchange the Dutch equivalent for *Aufwiedersehn* with the second officer at the stern and say good-bye to the old hospital steward whose plodding ways had been a matter of suspicion when I entered the service but on whose general dependability I had come to rely.

Now, in reflecting,

"If I pleased to spend real wishes on
myself—say three—
I know at least what one should be."

—if I were allowed to relive for a few days

one and only one phase of all of my experiences I would not choose two days in gay Havana, not two calm winter nights under tropical stars, not the true paradise of the beach at Nassau, nor the delight of the first trip along the steep green coast of Spain. I would not choose to spend the days in quaint sedate Holland or on the gay boulevards of Paris, nor even in the *gemutlichkeit* of the Vienna cafes. I should choose to visit the ship while she lay in New York harbor, to join the officers at their table, to greet them and be greeted with "bon appetit" and listen to their exchanges uttered in fine measured Dutch phrases, on subjects simple or great, hesitating to break into the picture with my English interpolations or my fragmentary Dutch. Sooner or later the skipper will say, "The food is always best when we are in port." He does not suspect, but I know, that it is the sauce that makes it good; the sauce of quiet friendly conversation arising out of the intelligent mutual understanding which these men who have known the sea all their lives have for each other.

THE EMBRYOHORMONIC RELATIONS OF THE ENDOCRINE GLANDS

II. THE EMBRYOHORMONIC RELATIONS OF THE PITUITARY GLAND TO MESODERMAL TISSUES†

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It is my object in this paper to reemphasize what I have contended for many years, that the pituitary gland has a selective action on mesodermal tissues. This fundamental fact becomes of greatest importance when disease involving the mesodermal tissues is present. Constitutional inheritance is exerted through the medium of the endocrine glands on certain tissues and in this article it will be shown that the pituitary gland influences the development and nutrition of the mesodermal tissues.

From the mesoderm are derived the following tissues:

Mesenchyme

- (a) Connective tissue (all types of connective and supporting tissues).
- (b) Cutis or corium—including the hair papillæ.
- (c) Cartilage—bone.
- (d) Dentin and cementin of teeth.
- (e) Pigment cells—mesodermal.
- (f) Lymph glands—lymphatics.
- (g) Spleen.

- (h) Blood.
- (i) Blood vessels.
- (j) Fat cells.
- (k) Smooth muscle.
- (l) Renal cells.
- (m) The joint cavities, the bursæ, subarachnoid and subdural spaces and their linings.
- (n) Nerve corpuscles (Pacinian corpuscles—nerve endings).

Mesothelium

- (o) Adrenal cortex.
- (p) Sex glands.

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(q) Striated muscles—including cardiac muscle.

(r) Pleuræ, pericardium and peritoneum.

As Fischel says, the ecto- and entoderm furnish the organs in whose development they are concerned with the epithelial portion only. They themselves (the ecto- and entoderm) are unable (with the exception of the lens and vitreous humor) to develop an organ in its entirety. On the other hand, an organ may consist entirely of mesodermal tissues for the mesoderm is able to supply the connective tissue as well as the epithelial element. This becomes of greatest importance for the embryohormonic relations of the pituitary to mesodermal tissues.

Because the pituitary influences the development and function of so many vital tissues, nature has protected this gland so that it is relatively inaccessible.

It will be noted that a division has been made of the mesoderm into a mesenchymal and a mesothelial portion. The reason for this will become apparent later on in the paper when the suprarenal cortex is discussed.

It is inadvisable to discuss the complete data which support the hypothesis that the pituitary controls the development of mesodermal tissues. It is my purpose here merely to outline some of the more obvious relationships as a detailed discussion of this gland's influence on each mesodermal tissue would be too spacious.

A discussion of the symptomatology of each mesodermal tissue found in pituitary disease does not give as clear a picture to the reader as does the composite whole but the dissection into its integral tissue symptomatology is necessary in order to show its selective action.

It is evident that according to the inheritance characteristics of the individual a part or parts of the mesoderm will bear the brunt of the pathology and symptomatology. The local "gen" is the place of least resistance according to the constitutional inherited predisposition. The German term for this tissue of least resistance is "gewebsminderwertigkeit."

Connective Tissue.—The influence which the pituitary gland has on connective tissue development goes hand in hand with the skeletal development. Through the agency of this gland secretion the various constitutional types are produced. The two main

groups, asthenic and sthenic, are well understood on such a basis. The asthenic type with lessened pituitary activity has, of course, poorly developed connective tissue with the consequence that this lack of supportive tissue produces enteroptosis and splanchnoptosis.

Without anticipating what is to follow later on in the paper, it is apparent that the organs of resistance to disease (bone, lymphatics, blood, adrenal cortex, etc.) which are mesodermal in origin are poorly developed in the asthenic individual. He is, therefore, subject to the wasting type of disease and in addition he has not the ability to form connective tissue to wall off infection such as tuberculosis.

Congenital hypopituitarism results in a general lack of connective tissue development throughout the body. In the mesodermal corium the connective tissue is poorly developed and the skin is loose and able to be taken up in folds.

The sthenic type with a congenitally active pituitary has well developed connective tissue so that his organs are carried high.

Hyperpituitarism results in a great increase of connective tissue throughout the body and overgrowth of this tissue is everywhere apparent. Connective tissue tumors, such as neurofibromata, fibromas, etc., are very frequently present in hyperpituitary states. One can understand that in certain congenitally predisposed hyperpituitary individuals the connective tissue overgrowth produces, through mechanical pressure, an atrophy of the sebaceous and sudorific glands so that the condition known as scleroderma results.

The subcutaneous connective tissue in hyperpituitarism as in acromegaly may even invade the musculature, and the skin is unable to be lifted into folds. Molluscum fibrosum is frequently found in hyperpituitarism. If pituitary cachexia develops in later life, the subcutaneous connective tissue disappears and a senile appearance with wrinkling of the skin is present.

Keloid formation is frequently found in acromegaly. The white race, when acromegaly develops, has a connective tissue overgrowth such as seen in the negro (thick lips, thick corium, etc.) and assumes negro characteristics. The negro apparently presents to an exaggerated degree the two main types of constitutional development, the asthenic and sthenic.

In experiments on rabbits, Osius and I were able to uniformly produce a fibrosis of the lungs by injection of posterior lobe extract. Putnam, Benedict and Teel, in producing experimental acromegaly in the dog, found an increase of connective tissue in all organs.

Cutis or Corium.—The derma or corium of the integument is developed from the mesoderm and as such is poorly developed in hypopituitarism, whereas it is overdeveloped in hyperpituitarism.

As has been stated in the article on the thyroid gland, the central shaft and bulb of the hair are ectodermal in origin whereas the hair papilla and outer sheath are mesodermal in origin. The nutrition of the hair is, therefore, dependent upon the *mesodermal papilla*.

The influence of the pituitary secretion on the mesodermal papilla is seen in disturbances of this gland. In hypopituitary states the hair development is very sparse. Adult men who have this condition seldom shave because they have no beard and also have very little hair on the body. The eyebrows, eyelashes, pubic, axillary and body hair is very sparse and of a fine texture. In pituitary cachexia the hair all over the body falls out.

Hypophysectomized puppies retain the lanugo form of hair development.

In contrast to hypopituitarism, hyperpituitary states are accompanied by a dense growth of hair all over the body—bushy eyebrows, coarse beard and generalized body hirsutism. This type develops baldness later on. An explanation of this type of baldness may be found in anatomical relations. The connective tissue increase which accompanies hyperpituitarism would, in time, interfere with the blood supply of the scalp. The scalp having little subcutaneous fat and being in such close proximity to the skull, there is very little room for play and the connective tissue would cut off the hair papilla's blood supply.

Bengston's recent work on certain types of baldness treated with benefit by anterior pituitary injections is interesting.

Leopold, Levi and Willorts noted a marked increase of hair in individuals with alopecia when fed pituitary tablets.

Aschner noted in one case of generalized alopecia that feeding pituitary tablets resulted in a rapid change in hair development

(rapid falling out of the hair followed by regrowth).

The importance of the pituitary relationship to the mesodermal hair papilla is apparent in many conditions.

In hyperpituitarism the opposite of hypopituitarism is seen. Men who have this condition possess unusually dark, coarse heavy beards. The hair of the body is everywhere well developed so that a condition of hirsutism results. It is interesting that from an empiric standpoint this has been associated with virilism and muscular strength. This, as we see, has a foundation in scientific facts. As we know and as will be emphasized, the pituitary influences the development of the skeletal, muscular and sex gland systems and, therefore, the hyperpituitary individual is well developed along these lines. It is my belief that the secondary sex characteristics are dependent *primarily* on the pituitary gland and only *secondarily* on the sex glands themselves. One may cite as an example the change in the voice due to enlargement and thickening of the mesodermal laryngeal cartilage at puberty. Lack of pituitary secretion at this time results in a retention of the boyish voice and underdevelopment of the sex glands, so that the male characteristics are recessive and the female predominant. Women with hyperpituitarism usually have hair on the lips, chin and a male distribution of hair. Likewise they have deep bass voices. This is frequently seen at the menopause.

The hirsutism of hyperpituitary conditions shows how well this fits in with the particular athletic constitutional type. The hirsutism seen in suprarenal cortex, ovarian and testicular tumors is due to pituitary involvement. Elsewhere, I will report the experimental work which is being undertaken to prove this.

Of further interest in this regard to hair development and the pituitary are the experiments of Iscovesco and Osius and myself. Iscovesco noted after feeding rabbits adrenal cortex lipoids that there was an increased growth of hair. Osius and I showed that feeding rabbits with a high fat diet resulted in a peculiar shagginess of hair. Without entering into a discussion concerning an obvious relationship between pituitary and fat metabolism, it is reasonable to suppose that feeding these fatty substances

would stimulate the pituitary with a resulting increase of hair growth.

Many skin diseases involving the corium are probably due to pituitary disturbances.

Recently Pillsbury has shown by experimental studies, that a specific carbohydrate metabolism of the skin may be observed. He says that lactic acid, an important product of carbohydrate metabolism, is normally present in the skin. The skin of animals previously injected with dextrose forms lactic acid *in vitro* in increased amounts.

These studies as well as the opinions of Kaposi, Bloch, Jadassohn, show that some decomposition product of carbohydrate material is the agent most probably concerned in the production of pathological changes in the skin in association with disturbed carbohydrate metabolism.

The relationship between the pituitary and carbohydrate and fat metabolism, as the most recent work shows, is, of course, of great importance in this regard. We may logically associate the pituitary gland and its known influence on carbohydrate and fat metabolism with the metabolism of the mesodermal corium. Particularly is this true in diabetes mellitus.

The details of such a study would be most interesting and profitable. Therapeutic weapons would, of course, be provided as a result of such studies.

Cartilage and Bone.—The relationship of the pituitary to bone and cartilage development is a very evident embryohormonic influence. In a general way we may say that hypopituitary states result in lack of bone and cartilage development, whereas hyperpituitarism produces increased bone and cartilage development. The faulty skeletal development in hypopituitarism has been described and emphasized by many writers. If the condition begins in early life or is congenital, pituitary dwarfism results. In later life, but still in the growing period, the stature will be diminished and growth may become arrested. In the male, the bony development assumes feminine characteristics and make-up, particularly in the pelvis, long hands, etc. *Genu valgum* is often present. The terminal phalanges show persistent epiphyseal lines. In the male, the larynx retains its puerile character so that empirically the high pitched voice is rightly associated with femininity. Many bony changes such as *coxa vara* are the result of pituitary insufficiency. Hyperextensibility of the

joints is usually seen in hypopituitary conditions of the congenital type.

Experimentally it has been proved that hypophysectomy results in a delayed ossification and marked retardation of bone development. Both clinically and experimentally pituitary insufficiency produces a delay in bone nuclei development and dwarfism is the natural result.

Smith, by hypophysectomy in rats, has produced the reverse picture of acromegaly. Among the changes found was a stunted skeletal development. Putnam, Teel and Benedict were able, by injection of anterior pituitary extract, to produce a skeletal overgrowth in a dog which was identical with human acromegaly.

In hyperpituitary states there is a marked increase of bone development and this assists to a great extent in diagnosing the condition. Gigantism and acromegaly are two examples of pituitary overactivity. In a general way it may be said that acromegaly results from hyperpituitarism after ossification is complete, whereas gigantism results when the condition is present before ossification is complete.

Cushing, Lewis and many others have described the bone changes seen in hyperpituitarism. Exostoses and bony overgrowth are commonly found in hyperpituitarism. This overgrowth is also shared by the cartilaginous system, the ears for instance become very large, as well as the cartilage of the nose, larynx, etc.

The embryohormonic relationship of the pituitary secretion to the osseous and cartilaginous systems suggests an etiological relationship of many pathological states of these systems. Osteogenesis imperfecta, fragilitas ossium, otosclerosis, some forms of osteitis fibrosa cystica and many other diseases of these tissues should certainly be studied along these lines for it is but logical sequence of reasoning that, coupled with a constitutional predisposition, the pituitary relationship to these tissues furnishes a basis for etiology.

My purpose for the present is merely to show the embryohormonic relation of the pituitary to the mesenchymal, osseous and cartilaginous systems. Its application to the Neanderthal man and other anthropological data is, of course, self evident. In addition one can readily see the practicability of studying mesenchymal diseases such as fragilitas ossium with otosclerosis, blue scler-

rotics and not infrequently other combinations of mesenchymal tissue involvement such as the blood with hemophilia and fragilitas ossium. While it is not my purpose to enter into a discussion of otosclerosis, the importance of the pituitary to the mesodermal portion of the auditory organ should be stressed. In studying patients afflicted with otosclerosis it was noted that they had certain features in common: familial tallness, menstrual disturbances in the women, hirsutism in the male—these being hyperpituitary effects.

The selective action of the pituitary secretion on mesodermal tissues is the keynote for understanding the etiology of otosclerosis. Overactivity of the pituitary in predisposed individuals will result in otosclerosis.

The statements of Crowe and Polvogt are very important. They say: "Mesenchyme may persist in certain portions of the middle ear and mastoid throughout life. The niche of the round window, the epitympanum or attic and the mastoid antrum are the usual locations. Histologic study of the temporal bones of the cases reported demonstrates an abnormal condition in the middle ear (a large amount of embryonic tissue) and an atrophy of the nerve and organ of Corti in the inner ear which is limited, however, to the lower half of the basal coil." They also state that persistent embryonic tissue in the middle ear in adult life is not rare. It is quite obvious that in these individuals overactivity of the pituitary would produce otosclerosis.

Dentin and Cementin of Teeth.—Pituitary hypofunction, particularly the congenital and infantile types, results in poor development of the dentin and cementin of the teeth. In the more serious hypopituitary conditions of the adult, such as cachexia hypophyseopriva (Typus Simmonds) the teeth crumble and decay rapidly. During the developmental period of the dentin and cementin, it is of course obvious that a severe hypopituitarism will result in serious dental disturbances with persistence of the first set of teeth. These are badly formed and decay very rapidly. Second dentition is rare in these severe forms. Coincident with this the jaw and the rest of the osseous system does not develop properly.

Hyperpituitary individuals have very beautiful teeth even without the usual dental care. Sthenic negroes whose pituitary is

very active have beautiful teeth. It is remarkable how well this works out clinically and gives a clue to hyperpituitarism.

Pigment Cells.—It is a certainty that at least some pigment cells are formed in the mesoderm. The mesoblastic origin of all pigment has much to favor it. In fact it would seem that pigment formation is a metabolic process and as such the mesoblastic origin hypothesis is undoubtedly the strongest.

The more the problem is studied, the more is one convinced that the mesoderm is responsible for all pigment. Since the mesoderm does give off, at least some, if not all the pigment cells, my present purpose is to bring the pituitary in relation with these mesodermal cells. The article on the pituitary and suprarenal cortex as related to pigment formation discusses the problem more in detail.

Certain facts immediately show that there is a definite relationship. Hypophysectomy in the frog results in an "albino" and extract of the posterior lobe injected into the "albino" frog skin produces a return of the normal color. In other words, the posterior lobe is a melanophore stimulant. This has been shown by many workers. (Hogben and Winton, Spaeth, etc.)

From a practical standpoint it is to be noted that hypopituitary states result in producing a light colored skin. The hypopituitary individual has an alabaster-like skin due to the lack of pigment. No doubt the vitiligo in some individuals is due to a lack of pigment in certain areas associated with a hypopituitary function. It is rather interesting as I noted that vitiligo is seen in people whose hair is streaked with gray and whose hair is or has been dark.

If one takes the trouble to study these patients one can find small fibromas in the skin, telangiectases and other mesodermal tissue involvement.

In contrast to hypopituitarism with the lack of pigment formation, the hyperpituitary individual has an increased pigment.

It is interesting that the Caucasian race developing acromegaly takes on the characteristics of the negro with his dark pigment. Dr. Max Ballin tells me that one of his patients who had been a blond previous to the development of acromegaly, became a decided brunette after its inception.

The pituitary is probably the responsible factor for the pigmentation of pregnancy.

Other alterations of pigment found in pregnancy, such as chloasma, are to be understood on the same basis of pituitary activity.

Of practical clinical importance are some observations which I made on cases of recurring iritis who had been unrelieved by therapy directed to foci of infection. These cases show a definite pituitary disturbance. Details of these iris findings in association with pituitary disturbances will be reported elsewhere. In a recent article on singular manifestations of pituitary tumors van Goor and Schaly noticed tumors of the iris in three cases. They state that the symptom-complex of metabolic changes and eye complications in acromegaly has never before been published.

Hypopituitary individuals as a general rule have fine light hair, whereas the hyperpituitary individual has comparatively coarse dark hair.

From our present state of knowledge, we are safe in saying that the pituitary occupies an important position in pigment metabolism. It is also of great importance in this regard that the adrenal cortex (to be considered later) reflects the state of the pituitary. The adrenal cortex has for a long time been associated with pigment metabolism and attention was directed to it by the bronzing seen in Addison's disease.

As definitely proven by statistics, brunettes have menstrual disturbances much more frequently than the blond. The pituitary relationship to the ovaries is, of course, well known.

The melanophore stimulating principle of the posterior lobe, while in itself understood as a pharmacologic effect, assumes greater significance when viewed in the light of its other stimulating actions on mesodermal tissues. For instance, it causes contraction of the blood vessels, a stimulation of the renal cells, and contraction of the smooth muscle. In addition it stimulates growth of the suprarenal cortex when injected over a period of time into rabbits.

As a general rule it can be said that dark haired women, with dark complexion and hypertrichosis, are more apt to suffer from hyperpituitarism and its consequent effect on mesodermal tissues than blondes. This is an important clinical fact and is useful in determining the activity of the pituitary. These women frequently have fibroids, and others of this group who do not develop fibroids pass through a period of too fre-

quent menstruation and then stop menstruating prematurely. This is seen in acromegalic women who pass through this cycle rapidly because of the overactivity resulting from an adenoma.

Laparotomies on these women show that the ovaries are either degenerative in type with cyst formation or the ovaries are hard and sclerotic with connective tissue formation. Zondek was able to inhibit the normal estral cycle in animals by injecting anterior lobe substance. The ovaries after two to four weeks became huge and were filled with corpus luteum. All the follicles were transformed into corpora lutea.

Through chronic stimulation of the ovary ovulation is inhibited and sterilization results. If continued the mesodermal connective tissue infiltration results in contracting the ovary with consequent sclerosis and atrophy.

Lymph Glands, Lymphatics, Spleen, Blood.—I have grouped these mesodermal structures under one heading in order to simplify the pituitary relationship to these tissues.

It is obvious that we are dealing with tissues essential to combat disease.

A patient's resistance is, to a large degree, dependent upon the development and normal functioning of these mesodermal tissues.

Applying the embryohormonic relation of the pituitary to these mesodermal tissues in question, it is natural to assume that a congenital pituitary insufficiency will result in a poorly developed reticulo-endothelial system. Such is the case clinically. It is best illustrated in the anencephalic monster with an entire absence of the pituitary. The monsters have all the mesodermal tissues greatly underdeveloped and some are missing entirely. The bones, adrenal cortex, kidneys, heart, blood vessels, sex glands, etc., are either undeveloped, malformed or missing. The lymph glands are everywhere poorly developed. Kaufman says that the spleen may be absent or malformed in anencephalus. The blood shows a severe grade of anemia with embryonic forms. The blood vessels and heart are all hypoplastic, the latter being very small and poor in muscle fibers.

Experimental hypophysectomy duplicates these findings in, of course, a lesser degree. For instance, Smith, Evans and others by hypophysectomy in animals were able to show the spleen, adrenal cortex, bones, etc., were small and poorly developed.

Young hypopituitary individuals also have this hypoplastic condition. For this reason, their resistance to disease is poor.

Anemia is the rule in hypopituitarism and there is a lessened blood volume.

Contrasting this with hyperpituitary states it is noted that the hematopoietic system is hyperplastic. The spleen is very large and the reticulo-endothelial system of the liver is hyperplastic. The blood volume is often increased. Polycythemia with cyanosis is a frequent finding in acromegaly. I, with others, am reporting the results of our experiments showing the pituitary's relation to polycythemia. Autopsied cases also will be reported.

Likewise, the adrenal cortex, which is concerned with resistance to disease, is markedly hyperplastic in hyperpituitarism.

Since the pituitary has a definite relationship to the hematopoietic system its association with certain blood dyscrasias and splenomegaly should receive much more attention. The beneficial effects of cod liver oil and sunlight treatment could well be understood by stimulation of the pituitary through these agencies.

Blood Vessels.—The pituitary's relationship to blood vessels is constantly becoming more evident. Particularly is this true of the posterior lobe. Krogh's experiments on frogs led him to conclude that the posterior lobe secretes a hormone in low concentration which maintains capillary tone. At a recent German Gynecological Congress, Fauvet reported that by repeated injections of posterior lobe substance into rats he was able to produce the identical pathological anatomical changes in the liver, kidneys and brain as that found in eclampsia and nephritis of pregnancy.

Hoffmann and Anselmino, at this same Congress, reported that they isolated a substance from the blood of nephritics and eclamptics which gave the identical reactions of posterior lobe substance. They definitely proved that in these cases there is an increased posterior pituitary secretion.

1. This substance produced at first a marked antidiuresis, almost to the state of anuria, then followed by a period of marked diuresis.

2. During the period of antidiuresis an abnormally high chloride concentration is present.

3. Physical-chemical reactions also

proved that this substance was posterior lobe secretion.

4. This ultrafiltrate substance was characterized by sensitiveness to alkali, like posterior lobe secretion.

5. Both are absorbed by talcum and both are destroyed by ultra violet rays.

6. Furthermore, from nephropathic patients and eclamptics in whom there was an increased blood pressure, the blood serum gave a substance which raised blood pressure. This substance when injected into animals raised the blood pressure. The second injection, like the posterior lobe hormone, does not raise the pressure as high as the initial injection.

Only one difference was noted, the commercial preparations are effective in raising the pressure only by the intravenous route, whereas Hoffmann and Anselmino's substance was effective by the subcutaneous route as well.

7. In contrast they found that the ultrafiltrate of nonpregnant and pregnant normal women did not produce these reactions. Interesting in this regard is the work of Draper, who found that the hypertension-nephritis group of pregnant women had a skeletal measurement whose increase was precisely along the same line as that found in acromegaly and gigantism.

Osius and I produced severe arteriosclerosis by feeding rabbits a diet high in fat and by daily injections of posterior lobe extract. The summary of the article was as follows:

"Either fat diet alone or pituitrin injections alone caused hypertrophy of the suprarenal cortex. The two in combination caused a notably greater hypertrophy. Similarly, marked arteriosclerotic changes were noted in the aortas of those rabbits receiving combined fat and pituitrin treatment. Lesser degrees of involvement were noted following either treatment singularly."

The embryohormonic relation of the pituitary to mesodermal tissues is offered as a reasonable explanation of the relationship shown."

Hypopituitary individuals have low blood pressure. Due to the lack of capillary tone there is acrocyanosis. They bruise very easily.

On the other hand, the sthenic type of hyperpituitary individual has well developed mesodermal, osseous and muscular systems and is subject to hypertension.

By assuming that the pituitary is too active in diabetes mellitus, certain forms of nephritis and hypertension of the menopause, we will have a better understanding of their production. It is interesting that hyperplasia of the mesodermal tissues is usually accompanied by hypertension with hypercholesterolemia. For instance, fibroids, polycythemia vera and so-called myoma heart, are associated with hypertension.

Tuberculosis and hypertension are not a common combination and when tuberculosis is present it is usually of the fibroid type. This is exactly what would be expected, for overactivity of the pituitary does not result in the asthenic habitus, but in the sthenic type with good connective tissue and hematopoietic reaction.

Acromegaly and gigantism are accompanied by arteriosclerosis and hypertension.

Hyperpituitary states should result in blood vessel hyperplasia and this is true clinically. The plethoric, hirsute, muscular individual suffers from hypertension and hypermetabolic disturbances.

It is apparent that only a few points of this interesting pituitary and blood vessel relationship have been touched upon.

Studying the pituitary-mesoderm relationship as a composite whole gives us a better picture of the problem.

With all the facts which we possess concerning hypertension, it is strange that the problem is not viewed from the standpoint of the pituitary-mesodermal relationships for we possess a host of clinical, experimental and pathological facts which force one to the conclusion that the pituitary is responsible for the development of the mesodermal tissues and this gland has the most important relations to these tissues. Obviously, I do not wish to imply that each time a mesodermal tissue is involved the pituitary is the etiologic factor.

Smooth Muscle.—The influence which the pituitary exerts on smooth muscle is, in a measure, shown by the pharmacologic action of posterior lobe extract which produces contraction of this muscle (bladder, uterus, intestine, etc.). This in itself would be of little significance unless supported by clinical and experimental evidence. Congenital hypopituitarism is accompanied by underdevelopment of smooth muscle, evidenced, for instance, in the female by a persistently infantile uterus. In addition, the smooth muscle of the intestines, bladder, etc., is poorly de-

veloped. This we find exemplified in many clinical hypopituitary states. Hypophysectomized young animals have underdeveloped uteri, intestines, etc.

Hyperpituitarism should, by the same line of reasoning, be accompanied by a hypertrophy and overdevelopment of smooth muscle. Clinical and experimental proof of this has been furnished. Hyperpituitarism in women is usually accompanied by uterine hypertrophy, to the extent of fibroid formation. Cushing and his associates have shown that concentric enlargement of the uterus is found in large women. This condition is often mistaken for fibroid formation.

Furthermore, Putnam, Teel and Benedict were able to produce a marked hypertrophy of a canine uterus by a series of anterior lobe injections. Evans, Zondek and others have likewise produced this enlargement of the uterus.

The smooth muscle of the intestines also hypertrophies to an enormous degree. This has been shown both by clinical and experimental work. It is stated by some that the peristalsis of the smooth muscled intestine is in a measure controlled by posterior lobe secretion, this being stated, of course, with reservations, since there are obviously other factors.

Renal Cells.—The association between the pituitary and renal cells has been known for some time and it is not my object to discuss the varying opinions expressed concerning the effect of the pituitary on this mesodermal tissue.

That there is a definite and intimate relationship is at once apparent to any one who studies the literature. The clinical fact that diabetes insipidus was found to be associated with lesions of the pituitary and that posterior lobe injections modified the course of this disease called attention to the pituitary-kidney relationship. It is also not the object of this paper to discuss the hypothalamic-kidney relationship as to whether it is primarily hypophyseal or not. Certain clinical and experimental facts prove beyond question that the pituitary is primarily responsible for the development, at least, if not the function, of the renal cells. The much cited anencephalic monsters with anomalies of the pituitary have various anomalous development and aplastic conditions of the kidney.

As additional evidence, we have the experimental hypophysectomy in young animals which results in unusually small kid-

neys. Smith and Evans, for example, have found this to be true. Dandy and Reichert also have produced the small kidney experimentally. Hypopituitary individuals have very small kidneys. Contrasting hypo- with hyperpituitary states we find, as would be expected, marked enlargement of the kidneys. In acromegaly there are recorded huge kidneys, four to five times the normal size, with enormous glomeruli. Putnam, Teel and Benedict produced this experimentally in their case of canine acromegaly.

Furthermore, there is evidence to show that the polyuria of vascular nephritis is due to the pituitary. Skubizewski, studying the microphysiology of the pituitary in connection with polyuria in parenchymatous idiopathic nephritis, came to the conclusion that the polyuria may be referred to the pituitary. There is a relation between an increase of basophile leukocytes with deep penetration in the posterior lobe of the pituitary and hyperfunction of these cells. Hoffmann and Anselmino's work previously cited on eclampsia and nephropathy is particularly applicable in this regard.

The discussion as to whether posterior lobe hormone stimulates or retards the renal cell function would seem answered by the former, for their work shows that antidiuresis is followed by marked diuresis.

I am of the opinion that the polyuria of diabetes mellitus is to be referred to the pituitary just as is that of chronic nephritis.

The relationship of the pituitary to diabetes insipidus is also important argument for the pituitary's influence on the mesodermal renal cells.

Nerve End Corpuscles.—The relationship between the pituitary and the mesodermal nerve end corpuscles is very interesting and furnishes us with a reasonable explanation of acroparesthesia which accompanies hyperpituitarism. Borak, in studying the origin of acroparesthesia, says that acroparesthesias are a constant symptom of acromegaly with and without normal menstrual flow and are likewise an almost constant symptom of the menopause.

As in acromegaly, there exists in the climacterium an eosinophile cell hypertrophy of the pituitary. He based his observations on 150 cases of acroparesthesias.

The sensations in the fingers or toes are described as crawling, tingling, numbness, crawling of ants, etc. Most frequently these

sensations are present at night. Acroparesthesia is found most frequently in women.

Interesting is the fact that I have observed acroparesthesia following within a few minutes after injections of "antuitrin," a form of anterior lobe substance.

The thought suggests itself that the state of the pituitary may be responsible for many skin conditions involving the nerve endings. Among these would be angioneurotic edema, urticaria and others. Studies along this line should certainly be made and the reader is reminded of the statements made earlier in the article between the relationship of the pituitary, mesodermal corium and carbohydrate metabolism.

Joint Cavities, Bursa, Subarachnoid and Subdural Spaces and Their Linings.—The relationship between the pituitary and the joint spaces (synovial membrane) brings immediately to mind joint diseases, particularly arthritic conditions. The large group of non-infectious or so-called endocrine arthritis fall into this relationship. It is well known that women at the menopause, when the pituitary hypertrophies, are especially prone to suffer from arthritis. As Pemberton and others have shown, arthritic patients have a lessened tolerance for sugar, just as hyperpituitary patients have. It not infrequently attacks women of the goiter, fibroid, cholelithiasis, hypertension group, in other words, the hyperpituitary type.

In contrast to this group is the statement of Stiller that his asthenic patients have an immunity to gout, diabetes, chronic rheumatism, chronic nephritis, degenerative heart and vascular diseases and practically never die of cardiac dropsy, sudden cardiac failure, cerebral hemorrhage, and seldom suffer from angina pectoris or a high grade arteriosclerosis.

Individuals of the sthenic group who suffer from arthritis have their supposed foci of infection removed without benefit to their arthritis.

It is, of course, foolhardy to say that foci of infection do not cause arthritis, but certain facts suggest that the medium through which they produce the arthritis is by the effect of bacterial toxins on the endocrine system. Certain it is that with all the exhaustive work which has been done on arthritis, the actual discovery of bacteria in the joints of arthritis has proven sadly disappointing. Hormonal stimulation by chem-

ical toxins would result, among other things, in pituitary activity with stimulation of synovial membrane growth.

The mechanism of synovial membrane growth is the same whether that be induced by bacterial toxins or by hormonal imbalance. As stated previously, when the ovarian function ceases, with consequent pituitary enlargement, then arthritis frequently develops.

Of interest along this line are clinical observations in treating certain cases with anterior lobe hormone, the patients complained of joint pains and those who already had arthritis became decidedly worse. A sufficient number of cases have been observed so that the "long arm of coincidence" can definitely be ruled out.

Furthermore, Putnam, Benedict and Teel's experiment on canine acromegaly show that anterior lobe hormone produced a form of arthritis. The photograph of the patella shows that the injected animal's patella is at least twice the size of the control animal and "bears many osteophytes."

In acromegaly, arthritis with spurs is the usual finding. The spine also shows arthritis with kyphosis.

Youthful hypopituitary individuals have hyperextensibility of the joints and frequently call themselves "double-jointed," because of the extreme flexibility of the joints. This is, of course, in marked contrast to arthritis with the limitation of motion due to swelling of the synovial membranes and bone changes.

Subarachnoid and Subdural Spaces and Their Linings.—The relationship between the pituitary gland and the subarachnoid and subdural spaces is a very interesting and important one. As has been shown by Weed and Cushing, posterior lobe extract increases the output of cerebrospinal fluid by stimulating the choroid plexus—a mesodermal structure. If the pituitary influences the choroid plexus and covering of the brain then it becomes of clinical importance in certain cerebral conditions as well as in pituitary diseases. An increase of its secretion would result in the production of increased cerebrospinal fluid and stimulation of the subarachnoid spaces. Headache would naturally be the result. This would explain the frequent headaches found in pituitary disturbances.

Quite naturally one would apply such re-

lationships to certain diseases associated with increased intracranial pressure. I refer particularly to migraine and epilepsy.

Kraus states that in cases of chronic increased intracranial pressure the pituitary weight is frequently increased by strumous enlargement of the anterior lobe. The enlargement is due to an increase in gland cells. In one-third of the cases there is a distinct proliferation of the chief cells in the basilar portion of the muscular layer and the neighboring portion of the medullary substance to the extent of adenomatous hyperplasia. Less frequently proliferation of the basophils of the anterior part of the anterior lobe is present.

In metastatic brain tumors and brain abscesses, pituitary enlargement is usually not present. Very frequently (84.5 per cent) there is associated an excessive cystic degeneration of the ovary.

In brain tumors of men and women increased Prolan (anterior pituitary) secretion is found in the urine.

The enlargement of the pituitary previously described may account for the Prolan found in the urine of these cases.

Ventra also describes a tumor of the frontal lobe associated with acromegaly in which the pituitary was intact.

In regard to epilepsy and the pituitary the beneficial influence of the ketogenic diet may well be understood on the basis of slowing up the pituitary function by lessening carbohydrate and fat metabolism.

Salmon has made some interesting studies on the relationship between the diencephalic (infundibular) neurovegetative apparatus and epilepsy. The author's main arguments are:

Demole's experiments with the injection of calcium and potassium salts into the region of the tuber cinereum have shown that the former causes muscular relaxation and sleep, while the latter causes motor agitation and epileptiform convulsions; Cyon Horsley showed that the slightest electric stimulation of the hypophysis induces convulsions; observations of Muller and Hogner showed that generalized tonic convulsions may result from sudden hypertension in the third ventricle; an epileptic seizure is usually followed by deep sleep, indicative of the functional depression of the infundibulum; epileptic seizures subside under the influence of phenobarbital, sonnifen, chloral, etc..

drugs possessing elective pharmacodynamic action on the diencephalic sleep-regulating apparatus; epileptic attacks are a frequent symptom of tumors of the hypophyseal region; the syndromes of acromegaly, hypophyseal cachexia of Simmonds, adiposogenital dystrophy and diabetes insipidus are frequently associated with epilepsy; epilepsy is often relieved by pituitary treatment; deficiency of solution of pituitary in the cerebrospinal fluid of epileptic persons has been demonstrated by Altenburger and Stern; removal of the hypophysis is often followed by epilepsy; a lesion of the hypophysis is frequently found at autopsies of epileptic persons; paroxysmal and post-paroxysmal hyperthermia in epileptic persons may be explained as the result of an irritation of the temperature-regulating center in the inter-brain.

The diencephalic seat of the presumed epileptogenous center explains its sensibility to quantitative and qualitative changes in the cerebrospinal fluid. Cortical and striothalamic lesions, by reflex action, may cause overstimulation of the hypothalamic neurovegetative centers, with resulting generalized convulsions.

Adrenal Cortex—Fat Cells.—Elsewhere I have shown that the adrenal cortex reflects or mirrors the state of the pituitary. This relationship is one of the most definite of endocrine correlations. Briefly stated, all the available data show that aplasia or atrophy of the pituitary gland is accompanied by adrenal cortex aplasia and atrophy; whereas hyperplasia and hypertrophy of the pituitary is accompanied by similar changes in the adrenal cortex. Our experiments, (Osius, and mine) as well as those of others, show that pituitary extract injections increases the weight of the adrenal cortex.

Hypophysectomy in animals produces a definite atrophy of the adrenal cortex.

Anencephalic fetuses with pituitary aplasia have, among other mesodermal tissue hypoplasias, an aplasia of the adrenal cortex. In Cushing and Davidoff's complete autopsies on four acromegals, all showed adrenal cortex hyperplasia and three of these had adenoma formation of the cortex. Case reports of adrenal cortex hyperplasia accompanying pituitary hyperplasia abound in the literature and this is also true of pituitary hypoplasia with an accompanying adrenal cortex hypoplasia.

The rôle of the adrenal cortex in chole-

sterol metabolism is as yet a disputed point but that it has some place in this metabolism would seem certain from the available data.

It is possible that the pituitary influences fat metabolism partially by its effect on the suprarenal cortex. Fat tissue, as we know, is a mesodermal derivative and as such is influenced by the pituitary. This is so well known and so definite that it is hardly necessary to cite much data. I do not wish to imply that the *modus operandi* is a settled issue, but the relationship is sanctioned by experience and supported by evidence, and that is sufficient for present purposes.

Elsewhere, I have shown that the suprarenal cortex has a selective action on a specialized part of the mesoderm, namely, the mesothelium. From the latter is derived the following tissues:

Sex glands.

Striated muscle including the specialized cardiac muscle.

Pleura, pericardium and peritoneum.

Since the state of the pituitary is reflected in the adrenal cortex, then the tissues under the latter's control would show the symptomatology and pathology in diseases of the pituitary.

Of course the severer the degree of pituitary pathology and therefore adrenal cortex pathology, the severer will be the mesothelial tissue pathology.

Primary pathology in the adrenal cortex, congenital in nature, produces the greatest changes in the mesothelial tissues. Likewise, primary hyperplasia in the adrenal cortex produces marked hyperplastic changes in these tissues.

That the pituitary influences the ovarian and testicular tissues is so well known that it is needless to enter into any discussion. Since Evans and Aschheim and Zondek's work on the pituitary-ovarian relationship a vast amount of work has been done which proves beyond doubt that the pituitary is the motor of the ovary. This is also true of the pituitary-testicular relationship.

Furthermore, the evidence shows that the corpus luteum of the ovary acts as a check on the pituitary, whereas the interstitial cells of the testicle have an analogous function in the male.

For further details concerning the adrenal cortex and mesothelial tissue relationship, the reader is referred to other articles which take the data up in detail.

Striated Muscles (including cardiac muscle).—Hypopituitary conditions are accompanied by poorly developed striated muscles as well as a hypoplastic cardiac muscle. The asthenic individual illustrates this. In hyperpituitarism the voluntary muscles are overdeveloped and, as Engelbach says, the hyperpituitary individual has very strong muscles being well developed without the aid of exercise. The cardiac muscle is much enlarged. Putnam, Teel and Benedict experimentally produced in the dog enlarged voluntary and cardiac muscle by injection of anterior lobe extract.

Deuticke found that after total extirpation of the pituitary in frogs, usually there may be observed a muscle weakness which may be demonstrated by isotonic and isometric spasm, accelerated fatigue, and a decreased functional capacity of the gastrocnemius. In animals continuously treated with anterior or posterior lobe preparations, in the majority of tests, the results demonstrable on transversely striated muscle show extensive compensation for the hypophysectomy. No increased functional capacity could be demonstrated in tests with pituitary extracts in the gastrocnemius of healthy normal frogs. Pituitary cachexia is accom-

panied by weakness almost as great as that seen in Addison's disease.

Pleura, Pericardium and Peritoneum.—It is only reasonable to suppose that since the pituitary gland contains the growth hormone and since it influences the mesodermal tissues, the mesothelial pleura, pericardium and peritoneum keeps pace with the development of these tissues. The hypopituitary individual would, therefore, have these tissues commensurately underdeveloped whereas in hyperpituitary conditions these tissues would be well developed.

Naturally hypodevelopment would necessarily be congenital in origin.

SUMMARY

The pituitary gland has a selective action on mesodermal tissues. Through its influence on these tissues this gland is responsible for the constitutional type an individual will be.

Illustrative of this, is the well known influence which the pituitary exerts on the mesodermal skeletal system.

The embryohormonic relation of the pituitary to mesodermal tissues furnishes an understanding of this gland's many sided activities.

MICHIGAN'S DEPARTMENT OF HEALTH

C. C. SLEMONS, M.D., Dr.P.H., Commissioner
LANSING, MICHIGAN

TYPHOID FEVER

Although much emphasis has been given in this column and elsewhere to the steps necessary to further reduce typhoid fever, this disease is actually higher in incidence in Michigan this year than for several previous years. This unusually high typhoid rate also exists in several neighboring states to the south and east. So far the reason for the general increase over a considerable part of the country is not apparent. If the "depression" is the answer, we do not know in what manner it has aided to produce an increase. The majority of cases are accounted for in small outbreaks which evidently have no direct connection with economic conditions. The number of cases reported in Michigan from January 1 to August 27 this year is 255. Last year for this same period there were reported 183 cases.

DIPHTHERIA

Diphtheria continues extremely low.

Never has there been a summer or a year with so little of this disease. Does immunization account for all of this decline? Diphtheria has in the past increased and decreased somewhat irregularly in seven to twelve year cycles. It would appear that independent of immunization we are now profiting by a "natural" decline. It is true that the decline which began in Michigan about 1922 has revealed a new low record. But will the same unknown factors which bring about a declining rate reverse again so as to give us another cycle of increasing rates? If so, we are about due for such a period.

The real test of the value of our immunization policies will take place during the next five to ten years. Godfrey has advanced the hypothesis that it is the percentage of children under five years of age in any community who are immunized against diphtheria that affects the diphtheria rate

and that immunization of school children has little effect on the total incidence for the community. Public health authorities have for some time advocated immunization of the infant at six months or a year. Can it be that we must wait until another increase in diphtheria occurs to convince the public that this disease is not conquered and will not be until it becomes a general practice to have infants protected by immunization before they are one year old?

The incidence of poliomyelitis has been lower than usual this year. Cases reported January 1 to August 27, 1932, are 53 as compared to 222 for last year during the same period and less than half that of the average year during the last ten-year period. The Michigan Commission on Infantile Paralysis is again functioning this year and supplying convalescent serum through its consultants. The physicians who are acting as consultants are not receiving any compensation from the commission.

C. D. B.

CHILD HYGIENE

Helen Linn, R.N., has resigned from the Bureau of Child Hygiene and Public Health Nursing and has accepted a position with the W. K. Kellogg Foundation. Her headquarters will be in Hastings. Miss Linn will be succeeded in the bureau by Bertha Wellington, R. N., former Home Demonstration Agent in Ottawa County. Miss Wellington is a graduate of Iowa State College; was extension worker for the Michigan State College for two years, after which she completed the nursing course in Battle Creek Sanitarium.

The series of women's classes in Genesee County conducted by Dr. Ida Alexander has been completed. During the six weeks' course in the county there was an attendance of 1,692.

A prenatal nursing program has been started in Allegan County by Martha Giltner, R.N. Miss Giltner is working with the members of the Allegan County Health Unit.

A breast feeding campaign is in progress in Monroe County, where Bertha Cooper, R.N., and Deane Rinck, R.N., of the Bureau of Child Hygiene and Public Health Nursing, are visiting mothers of young infants.

A breast feeding campaign was completed by Annette Fox, R.N., in Schoolcraft

County on August 11, and a similar program was completed by Nell Lemmer, R.N., in Manistee County.

Caroline Hollenbeck, R.N., is located in Ionia County, where she is carrying on a prenatal, infant and preschool program. At present, most of her activities are with the mothers of young infants.

Julia Clock, R.N., has completed a nursing service in Ontonagon County, where she was located for three months. During that time Miss Clock had 85 prospective mothers under her supervision, in addition to which she instructed mothers of infants and preschool children.

Staff members of the Bureau of Child Hygiene and Public Health Nursing have organized bleeding clinics for post-infantile paralysis cases in Kalamazoo, Jackson, Battle Creek, Flint, Saginaw and Lansing.

ENGINEERING

The summer work in highway water supply inspection and testing has been completed, and the new yellow approval signs have been posted on 1,870 wells along the trunk line highways. About 2,425 water samples were collected, 200 more than were tested in the roadside water survey of last summer. Only preliminary figures are as yet available, and the percentage of sources found safe has not been computed.

The five inspectors of summer resorts are still in the field, but it is expected that the work will be finished by September first, with the entire state covered. Less time has been required than usual because of the assistance given by the full-time county health departments, each one having assumed responsibility for the resorts in their territory.

Efforts are being continued to persuade the few remaining towns in the state that have unsafe water supplies to substitute safe sources. Three orders have been issued by the Department within the past three weeks. The eighteen municipalities that have already received orders to improve their supplies are showing encouraging results.

ANTIRABIC VACCINE

Judging from the inquiries received from physicians, the fact that the Department now distributes antirabic vaccine to physicians free of charge is not generally understood. Antirabic vaccine (Cumming) is put up in packages of seven doses each, and for the ordinary case 14 doses at daily intervals are advised.

THE JOURNAL

OF THE

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All communications regarding advertising and subscriptions should be addressed to F. C. Warnshuis, M.D., 2642 University Avenue, St. Paul, Minnesota, or Suite 1508 Grand Rapids National Bank Bldg., Grand Rapids, Michigan.

OCTOBER, 1932

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon

EDITORIAL

DR. LE FEVRE PRESIDENT-ELECT

Dr. George L. Le Fevre of Muskegon was chosen president-elect of the Michigan State Medical Society by the House of Delegates of the 112th annual meeting. The choice is a happy one. Dr. Le Fevre has been a member of his county and state medical society since his graduation in 1891, when he located in Muskegon. He was at one time president of the Muskegon County

Medical Society. For the past nine years he has been councillor of the eleventh district. The Michigan State Board of Registration in Medicine, of which he was a member, elected him chairman for sixteen years successively. For the past twenty years the new



DR. GEORGE L. LE FEVRE
President-elect, Michigan State Medical Society
1932-1933

president-elect has confined his practice to surgery. With him are associated his two sons, Dr. Louis, a graduate of the University of Pennsylvania, and Dr. William, of the University of Michigan Medical School.

Dr. Le Fevre's interests have extended beyond his profession. He is also chairman of the board of the Hackley Union National Bank. When the time comes a year hence to assume the duties of office, he will perform them with ability resulting from many years' intimate experience in the medical affairs of the state and its educational institutions, as well as happy contact with the medical profession of Michigan.

PRESIDENT MOLL'S ADDRESS

The first article in this number of the JOURNAL is the Presidential Address by Dr. Carl F. Moll of Flint at the recent 112th

annual meeting of the Michigan State Medical Society. Dr. Moll finds occasion to make a number of observations which we would like to emphasize. In the first place he refers to undergraduate medical education, which is always an important subject inasmuch as the medical student of today is the practitioner of tomorrow. His medical education should be a preparation not only so far as the scientific aspects are concerned but also the social and professional phases of his calling as well. The scientific side of medicine is well taken care of by our Class A medical schools. Dr. Moll advocates a course of lectures on the subject of ethics, preferably given by men in the active practice of medicine. Of course we presume Dr. Moll uses the term "ethics" to include not only the matter of abstract *right* and *wrong* as applied to the practice of medicine, but also to include the subject of professional relationships which cannot be distinctly so classified.

He emphasizes also the fact that medical service must always remain a personal service. As a corollary, the young practitioner should be taught to look upon each patient as an individual problem and as a personality to be dealt with rather than case number so-and-so to be diagnosed.

Dr. Moll touches on the subject of the cost of medical care. It is difficult, considering the studies of the past four years, to say anything new on this phase of medicine. To recapitulate, however, the cost of medical care has risen perceptibly since many now in their prime began practicing medicine. Among the factors adding to the expense are the various diagnostic agents which have come into being in the last quarter of a century. In spite of this fact, only a trifle over a third of the reputed cost of medical care finds its way into the pocket of the family doctor. The speaker attributes a goodly share of expense to unnecessary hospitalization and the employment of trained attendants in cases where their need may be questioned. He speaks of the necessity of furnishing the great middle classes (and we might say that the so-called middle class is ever expanding) with medical attention that is within their income, so that we do not make them objects of charity. Enabling patients to keep their bills paid up increases their self-respect, for, says Dr. Moll, "the man who once accepts charity,

even in dire circumstances, has lost a certain moral fineness of character that he can never regain."

Dr. Moll speaks of the "Specter" of State Medicine and dismisses the subject with the belief that the condition of state treasuries will not permit any immediate adoption of state medicine.

He goes at length into the subject of sickness insurance and concludes, "As long as we have united professional action in studying all theories and proposed plans for sickness insurance, and are prepared to meet them and direct them in an intelligent manner, we shall have little to fear in an economic way."

OUT OF BOUNDS

A correspondent sends us a card, numbers of which he says were deposited in automobiles in the town in which he practices, and asks if we think this is ethical on the part of the doctor who adopts this method of advertising his fitness to perform tonsilectomies, and also circumcisions, hemorrhoids and other surgical procedures. The circulator of these cards holds himself out to do such work for a fee of \$15, still further reducing his rates if the whole family and perhaps the neighbors employ him, and so on, *ad nauseam*. There are a number of these cut rate operators in this as well as in other states. Others again make use of the loud and flaming appeal in the way of signs to advertise their skill. This is confined not only to medicine; dentistry has also been invaded by numbers who use the billboard, radio, and street cars as a means of hawking their wares. The only hope of modest, plodding, capable men in either profession is to pursue the work honestly and conscientiously and with as much skill as they can command. Those who resort to loud and raucous advertising methods are beyond the pale of organized medicine or dentistry and are therefore not amenable to discipline. This kind does not seek affiliation with organized medicine or dentistry. They are freer to pursue their calling as outsiders than were they members of county medical or dental societies.

TRENDS IN MEDICAL SCIENCE

Elsewhere in this number of the JOURNAL appears a condensed report of the presidential address of Lord Dawson, President of the British Medical Association. Lord Dawson is one of the leading internists of England whose observations on the medical situation are of more than usual interest. In the first place he notes what he terms "diseases of invasion," to be diminishing and "diseases of stress" to be on the increase. The latter include those which are the result of personality plus environment. They call for a study of the patient (psychologically) together with his surroundings. Much disability is the result of error of thought probably due to financial and social worries. Such are amenable to one's control, in which cases the patient may be often helped by advice. In the first place a comprehensive diagnosis is necessary. Sometimes the cure consists in an explanation of his condition to the patient. Less medicine will be given and more education in methods of living. The patient will go to school. His education, among other things, will include how to eat, particularly if he is a man fat and over forty. Then again, a subject for re-education is the patient in the early diabetic stage. The education in this case will include instruction in calories and food, and perhaps in the administration of insulin.

Lord Dawson takes exception to the opinion expressed by Lord Moynihan to the effect that surgery had "almost reached the end of its progress along the line which so far it has followed, that the full fruits of Lister's work have now been garnered, and that with operations now carried out upon every organ in the body little further success can be expected." He thinks that the craft of surgery has yet large fields to conquer, particularly in the surgery of the thorax, the arteries, nervous system and ductless glands.

Probably, so far as technic is concerned, surgery has attained such a high degree of perfection that we may think of it as final; however, as a science, surgery has no limitations.

AUTOMOBILE ACCIDENTS IN MICHIGAN

Commenting on automobile accidents and the responsibility of motorists in this state,

the *Michigan Motor News* contains the following editorial:

"One of the distressing phases of Michigan's automobile accident situation is the financial irresponsibility of a surprising number of motorists involved. As many as twenty states have enacted legislation which tends to establish responsibility of all drivers involved in destructive accidents on state highways. Four Canadian provinces have pushed forward in protecting their citizens' lives and property by the creation of such laws. Michigan has been desultory in facing the issue and correcting it.

"According to a tabulation made by one of the leading insurance companies, only about a quarter of the 22 million passenger automobiles in the United States were insured in 1930, and the company estimates that the number of insured cars this year will show a sharp decrease. Michigan's record in the year the tabulation was made was not as good as the average for the country, our proportion of insured vehicles representing only 18 per cent of the total registrations.

"The report is disturbing because it means that the automobile driver is taking a chance with three out of every four cars he meets on the road. It means that he has but one chance in four of obtaining a satisfactory settlement in case of an accident for which someone else is to blame. It is logical to suppose the number of insured cars has decreased this year, since so many people disregard the importance of insurance at a time when their one financial background is weakened and when their normal incomes are impaired.

"With the curve of automobile accidents consistently rising, it is apparent that every effort must be made to reduce both the frequency and severity of accidents. It is to be hoped that laws compelling an automobile owner to show proof of his financial responsibility will find their way into the statute books of Michigan."

We have advocated compulsory insurance of automobiles, particularly in the matter of personal liability. Carelessness in the matter of making provision for possible accidents is brought home to the medical profession more than to any other class. Almost every member of the profession who has been called to take care of accident cases has experienced the loss of adequate remuneration or any remuneration at all. And in a great many cases the unfortunate victim of accident has no redress. Hospitals are likewise financial sufferers, particularly in the graver accidents, for often the patient has no funds with which to reimburse the hospital as well as the doctor. The toll of casualties in automobile accidents the country over resembles those of war. The right or privilege to drive an automobile should rest upon one's ability to protect the public against any accident that might result from collision. This might work hardship on some automobile owners; however, public safety should be accorded first consideration.

A CENTURY DEAD

One hundred years ago Sir Walter Scott, the Scottish poet and novelist, died. From many angles he was one of the greatest men, if not the greatest man, Scotland has produced. The hundredth anniversary of his death has called forth three timely and scholarly papers in the *Edinburgh Medical Journal* dealing with his medical history. No doubt many of our readers have perused the splendid editorial in the *Journal of the American Medical Association* of August 20, 1932.

Sir Walter, during his infancy, was the victim of infantile paralysis. Those familiar with Lockhart's Life (Lockhart was Scott's son-in-law) will doubtless recall the following account of his early illness which was written by Scott himself.

"I showed every sign of health and strength until I was about eighteen months old. One night, I have been often told, I showed a great reluctance to be caught and put to bed, and, after being chased about the room, was apprehended, and was consigned to my dormitory with some difficulty. It was the last time I was to show such personal agility. In the morning I was discovered to be affected with a fever which often accompanies the cutting of large teeth. It held me three days. On the fourth, when they went to bathe me as usual, they discovered that I had lost the power of my right leg. My grandfather, an excellent anatomist as well as physician, the late worthy Alexander Wood, and many others of the most respectable of the faculty, were consulted. There appeared to be no dislocation or sprain; blisters and other topical remedies were applied in vain. When the efforts of regular physicians had been exhausted without the slightest success, my anxious parents, during the course of many years, eagerly grasped at every prospective cure which was held out by the promise of empirics, or of ancient ladies or gentlemen who conceived themselves entitled to recommend various remedies, some of which were of a nature sufficiently singular. But the advice of my grandfather, Doctor Rutherford, that I should be sent to reside in the country to give the change of natural exertion, excited by free air and liberty, was first resorted to; and before I have the recollection of the slightest event, I was, agreeably to the friendly counsel, an inmate in the farmhouse of Sandy-Knowe. Among the odd remedies resorted to, to aid my lameness, some one had recommended that so often as a sheep was killed for the use of the family, I should be stripped, and swathed up in the skin, warm as it was flayed from the carcass of the animal. In this Tartarlike habitment I well remember lying upon the floor of the little parlor in the farmhouse, while my grandfather, a venerable old man with white hair, used every excitement to make me crawl. I also distinctly remember the late Sir George MacDougal of Makerstoun. I still recollect him in his old-fashioned military habit with a small cocked hat, an embroidered scarlet waistcoat, with milk-white locks, tied in military fashion, kneeling on the ground before me and dragging his watch along the carpet to induce me to follow it."

Scott had a noble ambition to found a house and estate that would perpetuate his name. Abbotsford, on the banks of the Tweed, is a monument to his tireless endeavor. The story of his financial disaster with the Edinburgh publishing firm is well known, in which the author became involved to the extent of over one hundred thousand pounds. He worked until he had nearly discharged this debt before death overtook him. He died at the comparatively early age of sixty-two of cerebral hemorrhage. Never robust in health, he managed to accomplish what many men of sound physique could never attain. His career illustrated in a very vivid way the law of compensation as applied to human beings.

MEDICINE, SUPPLY AND DEMAND

Medicine continues to be an attractive vocation to the young men of this country. Many more apply for admission to the medical colleges of the United States than can be accommodated. Some have managed to overcome this difficulty by taking their medical training in Europe and a number also attend the medical schools of Canada and return to the United States to take the state board examinations to enable them to practice here. The result is an over-supply of doctors in the United States. According to recent report, Canada is said to be able to absorb only about sixty per cent of her graduates. Approximately forty per cent evidently come to the United States as internes in the various American hospitals and eventually locate here.

The Educational number of the *Journal of the American Medical Association* mentioned gives an interesting table showing the distribution of medical students to European and Canadian Medical Schools. In Canada, McGill University, Montreal, gets the largest number, 207, with forty graduates in 1932; the University of Montreal 27 with 5 graduates; Dalhousie, Halifax, Nova Scotia, 25 with 10 graduates.

Of those crossing the Atlantic, the University of Vienna 154 and the University of Edinburgh 109 lead in numbers. There are 1,482 students reported, of whom 113 completed the course and graduated this year.

According to the *Journal of the American Medical Association* those going abroad are for the most part not so well prepared to

practice as those trained in the United States as judged from their records at the various state board examinations. Those trained and receiving the licentiate of the Royal College of Physicians and Royal College of Surgeons, England, and at the University of Edinburgh all passed; of graduates of some other foreign schools the failure in the number of candidates at the American state boards was as high as 100 per cent.

The United States has already more physicians in proportion to its population than any other country in the world and the tendency is for the number to increase. During the past nine years the average number of deaths in the profession was 3,088 a year. The average number of medical graduates the same period was 3,920, an excess over the number of deaths of 832. To increase the number materially will lower the standard of living for all, as it is being painfully felt by many at present.

Not only is the increase in the number seeking to enter the ranks of medicine having a grave effect on medicine, dentistry likewise has its own troubles. In spite of this, Detroit is to have a dental college. When the supply exceeds the demand in any profession, the result is to increase the struggle for existence with consequent deterioration of the high standards set by the better members of each, and a scramble by the less scrupulous in the way of commercializing the profession.

LEGAL DEFENSE

Legal defense is a valuable feature of membership. One suit or threat of suit may cost you anywhere from \$200.00 to \$1,000.00 in attorney fees—an amount equal to your county and state dues for twenty years or even a lifetime. Recently a member lapsed in his dues. Suit against him was started. His attorney fees were \$475.00—sufficient to pay his dues for twenty years. Against another doctor, who had been a member for but six years and whose total dues paid were \$90.00, a suit was started and \$1,180.00 was paid from the defense fund to attorneys who appeared in his behalf. Granted that he lives and practices forty years, he will still have saved \$500.00 and all the while protected as well as participating in the other membership benefits. Society membership is a valuable asset.

When threatened or sued, immediately notify your local society medico-legal representative and Dr. W. J. Stapleton, Chairman, Medico-Legal Committee, David Whitney Building, Detroit. Do not engage an attorney. Do not discuss the case. Remain silent till you receive instructions from Dr. Stapleton. If you are in good membership standing your legal interests will be protected.

WHY WORRY?

Come, Scientists, come
Dinna burn up yer lum*
Alookin' for what's at th' end,
For a certain amooont
Ye canna accooont,
There'r' things that ye canna transcend.

Ye look oot beyond,
An' point wi' yer wand,
But th' nineteenth Psalm's what ye see.
Th' story ye face,
A laddie o' grace
Writ'ed doon, as true as can be.

If yer goitre's atoot,
An' tonsils nae oot
An' signs show a pituitary,
Yer said tae engage
In harmonic rage
An' a tempera-mental spree.

But ah am mindin' o' th' time ma faither used tae pray
Mair aften an' far better than faithers do today,
When tempera-mental silly sap, was treated wi' a strap,
An' faithers were th' Doctors, wi' th' patient cross their lap.
They didna ken sae much aboot thae endocrineic glaunds,
Bit they got a lot o' peppiness, a singin' o' th' Psalms,
An' thinkin' o' th' Davie lad, wha's slingin' stane did level
Th' bully o' th' country then, Goliath, th' auld devil.

Sae dinna greet
If ye canna meet
Scientific facts no in sight,
Just keep atryin'
An' aye relyin'
On David's, "In THY light is oor light."
Ah, Weel, Guid Nicht,

WEELUM.

"We are living in a phase of evolution which is known as the twentieth century and stands for a certain achieved growth of the human mind. But the enormous majority of the human race do not belong to that phase at all. . . . Twentieth century civilization is cluttered up with living fossils surviving from every barbaric phase of the past, and masquerading as twentieth century people because no attempt has yet been made to insure that human beings shall wear modern minds as well as modern clothes and every care has, on the contrary, been taken to provide them with superannuated misfits."

—BRIFFAULT, in *Rational Evolution*.

"All great things have been won by men who would not conform. Where would astronomy now be if the great ones had not risked excommunication? Where would the Darwinian theory be if its author had conformed to the views of the majority? Where would modern surgery stand but for Lister's disregard of the sneers of his opponents? . . . The history of science and of human thought proves that men are not grateful to the discoverer of such truths as tend to disturb existing notions. The instinctive tendency of mankind is to resent any disturbance of its placid hold of traditional beliefs and to muzzle or suppress the disturber."—BERNARD HOLLANDER.

*"Lum" in the Scotch dialect means chimney.

MEDICAL ECONOMICS

MEDICAL REFORM

The following is the presidential address of Lord Dawson of Penn before the British Medical Association in its recent meeting at London. Lord Dawson is physician to King George. This summary of his address is given as reported in the Manchester Guardian.

"The art of medicine," Lord Dawson said, "embraces the understanding of illness, and if the physical and biological sciences are given a too-exclusive attention they are apt to give to medical thought a too-pronounced objectivity. We need to take count of the whole man. What of personality and its infinite variety? What of environment? In these days, when diseases of invasion are receding and diseases of stress loom larger, both these factors receive accentuated importance. A man's physical and mental make-up—his inborn trends—play no small part in the clinical picture he presents. To effect a cure, both aspects of the illness must be studied.

"Pervading these problems there is a fundamental error of thought—namely, that disturbances of your mind are under your control and are therefore your fault, whereas disturbances of your body are not under your control and are therefore your misfortune. This false doctrine of control, and all the perversions of the doctrine of free will with which it has long been entangled, is responsible for much faulty thinking and human suffering. Self-control can be bought too dearly or sought where it ill-belongs.

"And next as to treatment of these complex cases. Apart from remedies which are specific and those which assuage pain and assist relaxation and sleep, efficient treatment lies in comprehensive diagnosis. It is sometimes only necessary to explain an illness for the patient to cure himself. Let the doctor understand the component parts of the picture and explain faulty trends of thought and feeling and their relation to bodily function. Thus restoration of perspective and reassurance will follow, and the patient will be put on the road towards health. It is far easier to prescribe medicine than to give the patient healing.

"Persisting deviations from fitness require investigation. Hospitals and clinics will be needed for every class of citizen. There investigations can be made and results marshalled, and at less cost. Care will need to be taken that general practitioners do not become separated from their patients when the latter enter hospitals, for such would damage professional efficiency, to the disadvantage of the public. When the nature of the defects is disclosed the mere giving of medicines will often accomplish but little. What the patient wants is regimen and re-education in methods of living; treatment, it may be by diet, physiotherapy, and relaxation under controlled observation. Such treatment or education of the man and his tissues might take several weeks, and in most instances it would be advantageous for such patients to continue their ordinary avocations.

"We need a new type of institution—distinct from hospital provision—namely, a health hostel. Examples flow from any physician's experience. Overweight—the man of forty getting a fat body and a fat head, who avows himself a small eater yet is clogged with his own metabolic products; the man

becoming set about the neck and waist, who turns his body slowly rather than his head and eyes quickly, or who is bluish and breathless, losing his rib movements and wants to 'stay put.' Then, again, the patient in the early diabetic stage, where not only himself but his wife needs instruction in food calories and cooking, and it may be in the administration of insulin.

"All such and many more need for a space a designed environment; they require education, but under the conditions of their working life. Such institutions must have a kitchen under a trained dietitian, and a physiotherapeutic department; skilled control, but no cults or fads. It would prevent disease in untold measure, and would be self-supporting and even profitable. The cost to the individual might, where necessary, be defrayed out of that comprehensive sickness insurance scheme which we wait long and wearily for the vision and the constructive ability of the insurance companies to provide.

"The good of the people demands education in matters of health. Would it not be possible for the medical faculty of a university to include among its functions the provision of approved health lectures when such are demanded by the districts within the area of its influence? In this way sound educational standards would be maintained—fads and fancies avoided. The objective of such teaching should be a knowledge of health, with only incidental or illustrative reference to disease. The result would be great saving of illness, and, therefore, in a few years, of expense. Medical insurance costs employers, employed, and the State £36,000,000 a year."

Lord Dawson criticised the opinion expressed by Lord Moynihan in his recent Romanes Lecture at Oxford that the craft of surgery had "almost reached the end of its progress along the lines which so far it has followed," that "the full fruits of Lister's work have now been garnered," and that with operations now carried out upon every organ in the body little further success can be expected.

"This," Lord Dawson said, "gives me to wonder and to think: Surely surgery has not reached so gloomy a finality. Has not the craft of surgery large fields yet to conquer? There come to my mind the thorax, the arteries, the nervous system, and the ductless glands, as examples which are on the threshold of their possibilities, whether of purpose or technic."

After discussing the beginnings of medicine in Egypt and in Greece, Lord Dawson recapitulated the marvelous discoveries in medicine made during the hundred years' existence of the B. M. A. He then indicated several problems still awaiting solution. "The expanding volume of knowledge," he said, "must in time make clearer certain problems of sex in health and disease. Further, it perhaps foreshadows the time when sex perversion will belong more to pathology than to crime and require medical as well as legal handling."

Lord Dawson, referring to the recent discoveries concerning the pituitary gland, said, "Surely the pituitary is the wonder world of the ductless glands. This structure, consisting of two lobes and set in the base of the skull, though weighing not more than three-quarters of a grain, in a special sense presides over our destiny. Here is a wonderful kingdom over which the minute pituitary gland rules enthroned in the middle of the skull. This gland presides over the destinies of ourselves and our descendants. The anterior lobe influences our growth and our sex—its dominance and degree. Perhaps Descartes was not far afield when he placed the soul in the pineal gland.

"In this country the quest for new knowledge is to be found in all and varied quarters, and a rich

harvest is being gathered. The Medical Research Council is doing a great service in supporting and directing efforts wheresoever they come, and it maintains contacts between workers and between the institutions to which they belong. There is, however, need for further coördination among bodies which represent varied aspects of medical knowledge, such as the basic sciences, medicine, surgery, obstetrics, education, and administration. It is a reproach against our profession that we do not establish means of giving collective advice when the art of government depends increasingly on our knowledge. To the hackneyed saying that 'doctors always differ' let me reply that the vain repetition of error does not convert it into truth. In fact, there is no sphere of learning in which consensus of opinion on matters of importance is so forthcoming as in that of medicine."

GENERAL NEWS AND ANNOUNCEMENTS

Dr. Harrison S. Collisi and family returned September 2 from a nine weeks' European trip.

Dr. Carl E. Badgley, who has been on the staff of the Henry Ford Hospital since 1929, returns to the University of Michigan, where he will be assistant professor of surgery. His duties begin October 1.

Dr. Floyd J. Barkman of Calumet and Dr. Burt R. Shurly of Detroit have received the Order of the Purple Heart for military merit during the world war.

Dr. F. C. Warnshuis, Grand Rapids, was elected President of the Aero-Medical Association of America at the annual meeting held in Cleveland September 2 to 5. The next annual session will be held in Chicago. Dr. D. S. Brachman of Detroit was elected Secretary.

There were twenty-two candidates for the office of Coroner of Wayne County at the primaries, seven Republican and fourteen Democratic. The successful nominees are Drs. Albert L. French and F. B. Broderick, Republican, and Drs. Edmund J. Knobloch and Albert A. Hughes, Democratic candidates.

Dr. W. B. Cannon, professor of physiology, Harvard University, will be the Beaumont lecturer on January 30 and 31, 1932. The Beaumont lectures were established by the Wayne County Medical Society eleven years ago. The name is that of a man whom Osler designated "The Backwoods Physiologist," the scene of whose research was on Mackinaw Island. The next series of lectures will commemorate the hundredth anniversary of Beaumont's pioneer work, that is, the publication of his book on digestion. The Beaumont foundation committee of the Wayne County Medical Society are making elaborate preparations and extend a cordial invitation to every member of the Michigan State Medical Society to be present.

The major handicap prize of the Wayne County Medical Golfing Association will be the gift of all living ex-presidents of the organization, which include: Drs. O. S. Armstrong, L. E. Maire, C. G. Jennings, A. N. Collins, A. D. Holmes, Angus McLean, L. J. Hirschman, Don M. Campbell, J. A. MacMillan, W. L. Babcock, John N. Bell, George E. McKean, Harold Wilson, J. E. Davis, Wm. M. Donald, Frank A. Kelly, Wm. J. Stapleton, Jr., H. A. Luce, J. H. Dempster, G. Van Amber Brown, E. G. Martin, A. S. Brunk, J. M. Robb, and H. W. Plagemeyer. This beautiful trophy made its initial appearance at Thorncliffe on the occasion of the Third Annual Golfing Tournament of the Wayne County Medical Society.—*The Bulletin of the Wayne County Medical Society.*

According to the Educational number of the Journal of the American Medical Association, August 27, the total enrollment of students in the medical department of the University of Michigan for 1931-2 was 514; graduates in medicine 130. The faculty of the University Medical School consists of 22 professors, 12 associate professors, 30 assistant professors, 70 instructors and lecturers, a total of 134. Enrolled in the Detroit College of Medicine and Surgery were 315. The number graduated was 66. The faculty consists of 33 professors and 101 lecturers, a total of 134.

The next written examination of the American Board of Obstetrics and Gynecology will be held on Saturday, October 22, at 2 p. m., in 19 different cities of the United States and Canada. In order to reduce traveling expenses for candidates, special arrangements may be made through the Secretary for taking the written examination at any city other than those regularly specified where there is a Diplomate who can be empowered to conduct the examination. This arrangement does not apply to the general, clinical examination. For application blanks and other information, address Dr. Paul Titus, Secretary, 1015 Highland Building, Pittsburgh, Pennsylvania.

DR. E. A. CHRISTIAN HONORED

A complimentary dinner was tendered Dr. Edmund A. Christian, Superintendent of the State Hospital at Pontiac, on September 7, when about 150 of his friends assembled to do him honor at the Wardell Hotel, Detroit. The occasion was his seventy-fifth birthday and the thirty-eighth anniversary of his connection with the hospital when he succeeded the late Dr. C. B. Burr as superintendent. Dr. Christian had performed a half century of service. Mr. R. G. Ferguson, of Sault Ste. Marie, chairman of the State Hospital Commission, acted as toastmaster. Among the guests was Governor Brucker, who in a brief address spoke of the high esteem in which the guest of the evening was held throughout the state.

Dr. Christian was born in Detroit, September 7, 1857. He entered the University at the age of eighteen, taking his A.B. degree in 1879 and his M.D. in 1882. An honorary degree was conferred upon him in 1906.

Dr. Robert Haskell produced letters and telegrams of congratulation from all parts of the United States and Canada, which he turned over to Dr. Christian.

Among the speakers was the Honorable Junius Beal, Regent of the University of Michigan, who

was a fellow student with Dr. Christian. He referred to the large number who had been "graduated" from the institution over which the doctor presided to "the world of clear thinking." Mr. Beal spoke of the importance of mental hygiene from the University students' point of view. In the University of Michigan, the general average of forty-eight out of every thousand had been reduced to five per



DR. EDMUND A. CHRISTIAN

thousand who succumbed to the stress of student life.

Dr. Carl F. Moll, president of the Michigan State Medical Society, associated the guest with such honored names as Dr. Barrett, David Inglis and C. B. Burr, and credited him with making the Pontiac State Hospital one of the foremost in the United States.

Dr. Irving H. Neff, of Detroit, spoke on behalf of the employees of the hospital, as he had served for a quarter of a century with Dr. Christian.

Dr. Robert L. Dixon, of Lapeer, declared that it was not so much the half century of service that counted as the inspiration to others that the guest had proven himself.

Dr. J. D. Bruce, vice-president of the University, spoke on the subject, "The Durable Satisfactions of Life," in the course of which he said that the period of Dr. Christian's activities had been the most productive of all time in both medical and social advances, and that during this period, without losing anything of his supreme individualism, the practitioner had advanced more rapidly in the assumption of social responsibilities than ever before. He felt that a man who had devoted himself to the practice of medicine for 50 years, as Dr. Christian had done, had fulfilled the highest obligations of citizenship. It would be of great interest to learn the viewpoint of Dr. Christian concerning what things he deemed most worthwhile in his notable service as a physician. Dr. Bruce was assured that this would stimulate in each a desire for greater usefulness and a more careful consideration of the value of all of our

activities and interests. Consciously or not, man has struggled always for better and more enduring things. The solidarity of nations is built on the sum of individual expression. If each of us could approximate his ideals or even be animated by a desire to attain higher and more useful standards, we might partake of the best that life has to offer.

It is the physician's good fortune to be useful in man's first essential—physical and mental comfort or health. To relieve suffering, to correct disability, to guide in ways of health and even, though rarely, to save life, are the physician's privilege.

In his opportunity for intellectual activity the doctor finds that knowledge, skill, and constant intellectual advancement are not only necessary to success, but are a means of durable satisfaction. Success in the practice of medicine does not hinge on medical equipment alone but on an attitude of mind and a philosophy of life based upon a much broader fundamental training than that received in a standardized course of study.

Doctor Christian could not have satisfied the requirements of his position and lived a life of continued interest had it not been for a fine cultural background, a knowledge of books and things far beyond the confines of technical preparedness. The master word in medicine is intelligence that has been educated. "We are honoring tonight," said Dr. Bruce, "a member of our profession who has tasted to an unusual degree the durable satisfactions of life, and who is a symbol of the ideals and aims of his age."

Following Dr. Bruce's address a replica of a bronze plaque, the work of Carleton Angell, of Ann Arbor, was unveiled. The plaque, dedicated to Dr. Christian, was donated by a group of friends to be placed in the administration building of the Hospital.

The program was concluded by a reply by Dr. Christian, in which he declared the evening had been a complete surprise to him. He paid a high compliment to the capability and loyalty of his assistants and admitted that he possessed the faculty of selecting loyal and efficient coworkers.

There were friends present from all over the state, the affair being particularly represented by guests from Pontiac, Ann Arbor and Detroit.

The arrangements were in charge of a joint committee representing the State Hospital Commission and the Association of Medical Superintendents of the State Hospitals, consisting of Dr. Robert H. Haskell, chairman; the Hon. May Belle Downing, of Bay City; the Hon. Mary M. Hoskins, of Pontiac; the Hon. Enoch T. White, of Lapeer; and Dr. George F. Inch, medical superintendent of the Ypsilanti State Hospital.

COMMUNICATIONS

September 15, 1932.

Dr. F. C. Warnshuis, Secretary, Michigan State Medical Society in Convention Assembled, Kalamazoo, Mich.

The House of Delegates of the State Medical Society of Wisconsin assembled in its Ninety-First Anniversary meeting this week sends cordial fraternal greetings to the officers and members of the State Medical Society of Michigan, assembled in its one hundred twelfth annual meeting.

Cordially,

J. G. CROWNHART, Secretary.

OBITUARY

DR. WILLIAM F. BASTENDORFF

Dr. William F. Bastendorff of Detroit died suddenly in his office August 13, 1932. He was born at St. Johns, Michigan, seventy-one years ago and at an early age went to live at Dumbro, Ontario, where he resided until 1897 and then came to Detroit and took up the study of medicine, graduating from the Michigan College of Medicine and Surgery in 1900. For a few years he practiced at Halfway, Michigan, and then returned to Detroit, where he practiced up to the time of his death. He was a member of the Wayne County Medical Society, State Medical Society, American Medical Association, American Association of Retail Druggists and the senior club of the Wayne County Medical Society. He was also a member of the Maccabees. He leaves his wife, Margaret, and daughter, Mrs. Eva Maltas, the immediate family.

DR. EDWIN JOHN CORAM

The Wayne County Medical Society lost one of its younger members in the death of Dr. Edwin John Coram August 16, 1932. Dr. Coram was born at Grangeville, Idaho, December, 1893. After preliminary work in the University of Idaho, he was graduated from the University of Michigan Medical School in 1919.

DR. JACOB ROSENTHAL

Dr. Jacob Rosenthal died suddenly August 12, 1932, at his residence in Detroit. He was born in 1876, and was a graduate of Notre Dame University and the University of Pennsylvania School of Medicine. He was attached to the staff of St. Mary's Hospital and was a member of his county and state medical societies and a Fellow of the American Medical Association. He was well known in the Upper Peninsula and was a member of the Board of Pension Service. He is survived by his wife, Fannie, and a daughter, Florence.

MEDICAL HISTORY

Your Society expended \$8,000 for the compilation and publication of a Medical History of Michigan in two volumes. There remain some 400 sets of this history on hand. To dispose of them the Council has reduced the price to \$7.50 per set. Every doctor should own this truly excellent historical set of Michigan's Medical history. It is an appreciated gift to a friend or associate. Why not order a set from the State Secretary today? Payment can be made of \$4.00 with the order and \$3.50 in sixty days. Send your order today and enable the Society to dispose of these remaining sets.

SERVICE OBTAINABLE

Members are invited, yes urged, to avail themselves of the service that is yours at the State Secretary's office. Do you want an address, reference, specific information, clinical opportunities, or any other data? Write in for it. A prompt answer will be returned. If we haven't at hand that which you request we will secure it for you, if it is obtainable, or we will tell you where to inquire. A letter will bring you this service. You are invited to avail yourself of this service.

SOCIETY ACTIVITY

112TH ANNUAL MEETING

The Kalamazoo meeting is now a matter of historical record. It was appraised as our best meeting in five years. The registration, 1,076—796 members and 280 Auxiliary members—voiced their appraisal and expressed their personal appreciation of the excellent program that was carried out in full detail. The Kalamazoo profession were most cordial hosts.

Complete minutes will be printed in the November Journal. Our members are urged to look forward to that issue. Important actions were adopted and vital policies were decided on by the House of Delegates.

Dr. George L. Le Fevre of Muskegon was deservedly elected President-Elect. Grand Rapids was selected as the 1933 meeting place. Drs. T. F. Heavenrich, Paul Urnstrom, J. F. Powers and Harlan McMullen were re-elected Councilors. Dr. T. P. Treynor was elected a Councilor to succeed Dr. Le Fevre. Dr. Henry J. Pyle and Dr. C. E. Dutchess were elected Speaker and Vice-Speaker. Drs. J. D. Brook, H. A. Luce and C. S. Gorsline were re-elected delegates to the A. M. A.

Our Society sets forth on a new year of activity inspired by the spirit engendered at the Kalamazoo meeting. Under President Robb's leadership and inspiration we shall go far and accomplish much. Members are advised to watch the Journal for progress reports.

SAVING EXTRAS

Reduction of costs is a popular pastime. The great majority of citizens have adopted that plan in their professional, business and personal affairs. It was not by choice. It was a compelling necessity. We all are realizing that we had been extravagant. We indulged in luxuries and ease which we now realize we could get along without and still be comfortable and happy. We can do good work without them.

So, too, in Medicine. We played the extras that were not essentials. It was easier and pleasanter. Patients were sent to hospitals and seen on our rounds in a shorter

time than it would take to make individual calls at their homes. It made for more leisure time. Minor cases were hospitalized when they might have been cared for in the home.

We have learned a lesson. Necessity compels the saving of these extras today, and if the lesson is well learned they will be saved in the future. If tonsils can be removed in the office they can be removed at home. Cysts, lipomas, circumcisions under local anesthesia can be done in the home or office. Many other minor surgical procedures need not require hospitalization. That expense can be saved and the probabilities are that the saving will result in prompt payment of services.

In therapy a little time spent in re-familiarizing ourselves with our materia-medica will reduce prescription and drug cost. Proprietary preparations can be safely substituted by a regular prescription for the essential drug and accomplish a saving.

Cessation in fads and the discarding of some of the serum rackets will produce savings. The recognition of the limitation of physiotherapy will eliminate expense.

Violet and infra-red rays have limited application, as also diathermy. Plaster can be made as a perfect splint and will do away with expensive mechanical devices. Gauze purchased by the bolt and cut into convenient sizes and sterilized by the office girl will accomplish a saving in dressings.

We cite but a few instances. A sincere review of methods and treatments will uncover a number of other non-essentials and luxuries which when eliminated will be productive of saving cost and expense to both patient and physician. Why not, if you have not already done so, begin saving extras today?

MAY WE HAVE?

1. Reports of every county meeting and what your local society is accomplishing. Reports should be in the State Secretary's hands not later than the fifteenth of each month.

2. News items of general interest.

3. Patronage of our advertisers. Give them your business in preference to non-advertisers.

4. Subscribers to our Medical History—two volumes at \$7.50 per set. They are a

splendid and appreciated gift to friends, hospitals and libraries.

5. A resolve to participate actively in the work of your county society, and to accept and discharge committee duties.

6. The extending of an invitation to every eligible doctor, urging him to affiliate.

7. Not knowingly or unknowingly to be the cause for a damage suit against a fellow physician by ill-advised remarks or comments.

8. Coöperation with your local health officers.

9. Advising your patients to permit your vaccinating and immunizing their children and to do it yourself at a reasonable fee.

10. Calling consultation and assistance in all serious cases and those in whom the diagnosis is undetermined.

WOMAN'S AUXILIARY

What has been said regarding the activity of County Societies applies directly to the Woman's Auxiliaries. Auxiliaries merit existence only when they achieve and accomplish definite ends. There is no need for a new social organization. Too many of that type already exist. Auxiliaries that accomplish definite ends, exercise educational influences and initiate constructive programs are the only ones whose existence is justified.

The word and advice therefore goes forth for local auxiliaries to establish immediate contact with the officers of County Societies, decide upon a program of local work and then bend every effort to complete the work. It devolves upon every auxiliary to justify its value and existence.

RESUMPTION OF MEETINGS

Fall marks the resumption of Society programs and meetings. A wide opportunity confronts every county society. Scientific papers, case reports and discussions characterize the major features of a meeting. They should, however, not be the sole feature.

A certain amount of time should be devoted to society business and the consideration of community problems. The county society should concern itself with community interests and exercise a wholesome guiding influence. Such influence may well con-

cern itself with health matters, school problems, the activities of Parent-Teacher organization, local government, hospitals, care of the indigent, and all and every local business or movement which concerns every individual. Participate in the programs of luncheon clubs, business organizations and Legion posts. Impart to them helpful medical and health facts and induce coöperation in establishing the observance of sound medical and health principles.

Such community participation may best be instituted through committees composed of members whose vision is broad and who will contribute time and effort in study and application. We commend and cite as exemplary the work being done by committees from the Wayne, Kent, Muskegon, Ingram, Saginaw, Oakland and Jackson counties. Their activities may well be duplicated.

A society composed of ten or twenty members can achieve just as much good and initiate equal reforms and establish similar influences as can the larger societies. Just because a small membership constitutes your county society is no reason for inactivity. Equal opportunity is yours.

It is therefore advised that at your next meeting, time be allotted for discussion of community problems and that a program of work and the requisite committees be decided upon. Set out to secure the recognition and good will of your fellow citizens. It is the duty of presidents and secretaries to initiate and prod the work of committees.

In these days of changing conditions, when new relationships are being established, county societies can find many opportunities for well directed activity. How many societies will embrace the opportunity?

SURVEY OF MEDICAL AGENCIES

The committee in charge of this survey is continuously active in the completion of its task. Its work will be expedited if members will be prompt with their replies. Prompt activity on the part of County Public Relations Committees will further add to the rapidity with which final findings can be tabulated and published.

All are urged to subscribe personal response and immediate answer of all inquiries. You will profit by the end-results.

COUNTY SOCIETIES

NORTHERN MICHIGAN

The regular monthly meeting of the Northern Michigan Medical Society was held at the Perry Hotel, Petoskey, September 8, with an attendance of about fifteen members.

The meeting was called to order by Vice President Grillet. The secretary's report was read and approved. Dr. Engle, Petoskey, was appointed to the program committee. A motion was made to instruct the secretary to send flowers to Dr. Armstrong, who was confined to his home with illness.

The rest of the evening was spent in hearing the report of the Public Relations Committee in regard to its progress in drawing up an indigent fee bill. There was a great deal of discussion and the various members were heard from.

Motion was made and carried that a special meeting of the society be called for Thursday, September 29, the meeting to deal exclusively with the fee bill.

Dr. Larson of Levering and Dr. McMillan of Central Lake applied for membership in the society. Their applications were referred to the Membership Committee.

The secretary was requested to use either telephone or telegraph to notify members of the special meeting. The meeting was recessed to September 29.

ERVIN J. BRENNER, *Secretary.*

A CONVENIENT NEW PHARMACOLOGY OF THE MEDICINAL AGENTS IN COMMON USE

The student of medicine will always find the large standard texts on pharmacology indispensable for critical study of the actions and uses of drugs. These texts, however, are in many instances so voluminous that they are not available for ready reference or for study in spare moments.

Heretofore there has been no comprehensive, small-size work on pharmacology. To meet this need Dr. Stanley Coulter, Dean Emeritus of the Purdue University School of Science, spent over three years in the preparation of a compact treatise on the pharmacology of the drugs now in common use by the medical profession. In this work he had the coöperation of members of the medical and research staffs of the Lilly Laboratories.

The subjects are alphabetically arranged for quick reference. Under each title there is a terse statement of the constituents of the drug, its physiological action, dosage, and brief mention of its more important therapeutic uses.

This Pharmacology is prepared with special attention to the needs of the medical student. The main part of the text dealing with individual drugs is followed by an appendix of tables and miscellaneous information useful to the medical student. In no sense is this book intended to supplant the larger standard texts on pharmacology. On the other hand, it is the hope of its author and the publishers that the use of the pocket-size book will so intrigue the student in the subject that he will be led to closer studies of the great authorities on pharmacology.

The book is supplied in flexible fabricoid binding, 254 pages, 3 $\frac{3}{8}$ by 6 inches, green edges; published by Eli Lilly and Company, Indianapolis; price 50 cents per copy postpaid.

OF GENERAL MEDICAL AND SURGICAL INTEREST

THE X-RAY UNIT OF THE HOSPITAL OF THE UNIVERSITY OF MICHIGAN

The following description of the new X-ray Department of the University of Michigan appeared in *Science*, April 22, 1932.

"After four months of remodeling and installing new equipment, the University of Michigan Hospital . . . opened recently its new X-ray department, which is said to be unexcelled by any similar installation in the country.

"The new unit is featured by a novel plan of rooms and apparatus which stresses convenience and privacy for patients and the quick processing of the X-ray films. From waiting rooms the patients are directed to private dressing rooms from which they pass as called, by private corridors, to the proper department. A complete 'traffic system' of lights, which indicate what rooms are in use to all offices of physicians and the directing staff, makes possible quick routing of patients, so that routine X-ray examinations may be made at the rate of twenty an hour.

"Rapid development of films to aid physicians to make an early diagnosis is made possible by a modern dark room, provided with dry air from which all moisture has been chilled out by special refrigerating machinery. Once in operation for the day, the room need never be lighted or work stopped, the completed films being passed out through a double-doored, light-tight well for final rinsing and drying. From the drying rack they may be taken directly to the physicians' offices, each of which has its own viewing apparatus, so that a report may be given in a fraction of the usual time needed.

"Among the other details of the equipment are lead lined rooms which confine the rays of high voltage treatment apparatus, with lead glass through which the doctor or technician may observe the patient, a room in which X-ray films of the chest of bed-ridden patients may be taken through the bed by apparatus beneath the floor, special equipment for locating foreign bodies in the eye, and automatic apparatus, which, as soon as one patient's films are made, resets itself for the second stereoscopic exposing. Memorializing Dr. Preston M. Hickey, for many years head of the department, is a staff library which will contain publications on roentgenology, given by Dr. Hickey's friends, former associates and assistants, and a complete set of special X-ray studies of normal and diseased parts for reference. Classrooms and research laboratories for medical students are also provided within the department. The memorial bas-relief of Dr. Hickey, presented this last year by the American Roentgen Ray Society, has been hung in the special conference room set aside for the members of the hospital staff who wish to review the examination of their patients with members of the roentgenology staff."

WHAT IS SCIENTIFIC MEDICINE? (New England Journal of Medicine)

One frequently finds the expression "scientific medicine" but rarely does one come across a clear exposition of what the term means. Of each cult there is a definition, clear enough as far as words go, though it is not always so clear that the practice of the cult falls within the limits set by the definition, and there is added a dogma or doctrine or theory of disease and its treatment which is com-

prehensive in scope and adequate in efficiency (for the sectarian).

Contrasted with this is scientific medicine. It has no single theory of disease; its doctrines are numerous and change from time to time. If any doctrine becomes dogma it is suspect at once and is on its way to rejection from the field of science. If one can get a comprehensive view of scientific medicine it may seem to contain a mass of heterogeneous knowledge, with contradictions and inconsistencies, with large areas of ignorance, vast fields of unknown and unexplored country. It is much like matter to the physicist. Ordinary matter of which one builds steel and concrete structures seems quite dense to the physiological eye of the physicist. To his electronic eye the ultimate particles of which matter is composed are astonishingly far apart.

This is an apt figure of comparison. For the scientific physician, overcrowded as he may seem to be with knowledge so much more abundant than he can ever acquire, the unknown is far greater than the known. The problems in medicine to be solved far outnumber those solved even in tentative fashion. Every problem solved opens up new fields of inquiry and investigation and research. There is an abundance of facts for which no conciliation has been found and their significance has not been determined. There are inconsistencies seemingly hopeless, with present knowledge. There are contradictions intolerably irritating in their insistence on the need for deeper insight and greater understanding.

All these things are true of scientific medicine. It has made but a beginning, yet it has chosen the better part. One speaks of the cults and scientific medicine. A more justly antithetic statement is dogmatic and scientific medicine, for this expresses the essential weakness of the cults.

Scientific medicine varies in content from year to year, searching for new knowledge, leaving acquisitions that have been outgrown; it is patient, humble, seeking knowledge from any and every source, but trying everything that comes to it in accordance with strict rules of evidence, asking always, What is the evidence, what is the evidence, what is the truth?

PROGRESS OF OPHTHALMOLOGY

HARRY FRIEDENWALD, Baltimore, concludes his discussion of the growth of ophthalmology with the statement that the first third of the twentieth century has added little in the discovery and description of new disease categories excepting in relation to those associated with the pituitary gland, with vitamin deficiency and nutritional disturbances and with encephalitic diseases that have appeared in recent years. But important advances have been made in the diagnostic and therapeutic use of the X-rays and radium. The successful application of the microscope to the examination of the anterior segment of the eyeball has enabled ophthalmologists to study pathologic changes and processes during life which were formerly only to be observed in the laboratory. Improvements have been made in the ophthalmoscope which have increased the precision of examination, such as the elimination of reflexes, the use of illumination with light of different colors and especially with red free light and with monochromatic light and the correction of spherical and chromatic aberration. There has been much experimental study bearing on the nutrition of the various parts of the eye, the chemical changes in the intra-ocular fluids, studies which the author believes are destined to throw light on those obscure processes leading to the various forms of cataract and glaucoma. The effects of various forms of radiant energy on the eye have been carefully investigated. In many ways

research has been directed to solve the many problems which the eye presents, whether considered anatomically, physiologically, embryologically or pathologically. The introduction of instrumental aids, the spirit of research of great teachers and the extraordinary development of physical and biologic sciences, which gave inspiration to every department of science and medicine, explain the marvelous growth of ophthalmology since the middle of the nineteenth century. With every advance of knowledge, there open new vistas of the unknown. The problems become more and more intricate; they deal with the fundamental processes of nutrition and repair, with the reactions of tissues, cells and protoplasm to the many substances from without and from within the organisms that act on them. Investigations require the aid of general physiologists and pathologists and of biochemists in cooperation with clinicians. It is in the line of natural development that university laboratories and institutes of ophthalmology have been founded in recent years, for only through them can such coöperation in scientific investigation be secured. It is from them that the next great advances in ophthalmology are to be looked for.—*Journal A. M. A.*

DIET IN BRIGHT'S DISEASE

JAMES S. MCLESTER, Birmingham, Ala., points out that the diet which is gaining recognition today as suitable for the patient with Bright's disease is radically different from that of the past. Formerly, in treating this disease, physicians thought only of the kidney; today, in keeping with modern ideas of treatment, the chief consideration is for the patient himself. It was the custom to think only in terms of protein catabolism and of the harmful effects of its end-products, and consequently the patient was told that he must eat no meat. Now attention is directed to the anabolic influences of protein, its up-building effects and beneficial influence on repair processes, and the patient is told to take liberal amounts of this essential food stuff. The whole protein problem is a much vexed one. Undue emphasis has been laid on the supposedly harmful effects, even in health, of nitrogenous degradation products, while the essential rôle which protein plays in repair processes and in the maintenance of vigor seems to have been largely overlooked. The weight of evidence would indicate not only that a large protein intake per se is without harm, but, further, that if man would enjoy full health and sustained vigor his consumption of protein must of necessity be liberal. This applies not only in health but in large measure in disease as well, notably in Bright's disease. A distinguishing feature of Bright's disease in its acute hemorrhagic and chronic degenerative forms is a marked loss of body protein. The infection which causes nephritis, whether it be of scarlet fever or tonsillitis, or some other form of bacterial invasion, produces, first of all, a toxic destruction of body protein; then as the disease progresses there follows a marked loss of albumin through the urine, which entails an excessive drain on the body proteins and results finally in a measurable plasma protein deficit. It would appear that in acute hemorrhagic nephritis the chances for complete recovery depend largely on one's ability to compensate for the protein loss. This can be accomplished in but one way: by permitting a liberal intake of protein, adequate in amount to make good the deficit. It is difficult to state accurately the amount of protein which should thus be included in the ration of an adult with acute and subacute nephritis. The daily allowance at the present time is usually between 40 and 50 Gm., but judging by the author's experience as

well as the carefully controlled experiments of McCann and others, one would conclude that approximately three times this amount, that is, 150 Gm. daily, is more nearly correct. The composition of the diet in other respects also is of importance. Since the total quantity of food should be ample to meet the patient's metabolic needs, there should be included, in addition to the protein quota, fats and carbohydrates in amounts sufficient to cover his requirements for energy. For economy in nutrition, carbohydrate should provide at least 50 per cent of the caloric value of the ration, preferably more; only in this way can it be assured that the protein of the food will be used for purposes of repair rather than burned for the production of energy. The type of food chosen, provided these specifications are met, is of little importance, with one exception: The protein should in large part be of high biologic value such as is found in meat, milk and eggs. In general it can be said that if the adult with nephritis takes a quart of milk daily, two eggs and one large serving of meat, his need for protein will be covered and no harm will be done his kidneys.—*Journal A. M. A.*

NEUTROPENIC STATE

According to CHARLES A. DOAN, Columbus, Ohio, the neutropenic state may be chronic or acute, constant, recurrent or nonrecurrent. In diagnosis it must be sharply differentiated from the leukopenia associated with many other clinical syndromes. The chronic condition of moderate leukopenia may either mean a normal physiologic equilibrium maintained at a level somewhat lower than the average, with no detectable influence on the normal health of the individual, or it may reflect a low myelocytic reserve in the marrow with constant potential danger of marrow insufficiency and decompensation. The acute or malignant neutropenic state presents a crisis that is rapidly fatal if recovery of marrow function is not initiated promptly. The underlying pathologic condition may include myeloid hypoplasia or hyperplasia. Experimental and clinical observations form the basis for attributing to nuclei acid and to the nucleotides chemotactic, maturative and initiatory stimuli for neutrophilic myelocytes when the basic mesenchymal tissues from which they arise are in a condition to respond. Blood transfusion and irradiation may act through the same nucleotide mechanism, when effective. The latter, because of its potentially destructive affinity for hematopoietic tissues, must be used with great caution when stimulation is desired. Further experimental studies are needed to ascertain whether the X-rays may be really primarily stimulatory to myeloid tissue without a preceding destructive phase.—*Journal A. M. A.*

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THE DOCTORS' LIBRARY

THE SPUTUM; ITS EXAMINATION AND CLINICAL SIGNIFICANCE. By Randall Clifford, M.D., Associate in Medicine Peter Bent Brigham Hospital; Assistant in Medicine Harvard Medical School. Formerly Associate physician and director of pulmonary clinic Massachusetts General Hospital. New York: The Macmillan Company, 1932. Price \$4.00.

In the 167 pages that make this book, the author has brought together laboratory and clinical data that would require the reading of many technical medical papers on the various subjects treated. An examination of the sputum has meant for perhaps the majority of doctors a search for the tuberculosis bacillus. The author has proven that it has a much wider application. He has given in detail methods of preparing slides, staining sputum and interpreting the findings. There is also a section on the microscopic examination. The book is well illustrated and many of the illustrations are in colors. An extensive bibliography at the end of each section suggests avenues for further study.

A MANUAL OF DISSECTION. By George B. Jenkins, M.D., Professor of Anatomy in the George Washington University Medical School, Washington, D. C. 289 pages. Limp binding. Phila.: Lea & Febiger, 1932. \$3.00.

This manual treats of dissection in four subdivisions: head and neck, upper extremity, thorax and abdomen, and lower extremity. The sections may be followed separately or in order. The work, devoid of illustrations, consists of short and exceptionally clear descriptions of the parts met in the order of dissection. The method of approach is practical and, if supplemented by systematic lectures, atlases and reference texts, should form the basis for a sound introduction to gross anatomy. A supplementary section summarizes the vascular and nervous systems. That part on the peripheral nerves, arteries and veins should prove helpful to the student. The section on the lymphatic system is misleading in that the course of lymphatic drainage is ignored—node groups alone being summarized. The sympathetic system is likewise poorly handled since only the gross features of the thoraco-lumbar innervation are dealt with. This work will appeal especially to the reader who wishes to review his anatomy. The clear, concise descriptions will appeal equally to student and surgeon. Although topic headings are lacking in the text, an adequate index compensates.—W. T. D.

MENTAL DEFICIENCY DUE TO BIRTH INJURY. Edgar A. Doll, Ph.D., Director of Research, The Training School at Vineland; Winthrop M. Phelps, M.D., Professor of Orthopedic Surgery, Yale University School of Medicine, Consultant on Birth Injuries, The Training School at Vineland; and Ruth Melcher, M. A., Research Assistant, The Training School at Vineland. Price \$4.50. New York. The Macmillan Company.

The authors were motivated by a belief that in spite of the complete motor helplessness of certain birth-injured children, some of them at least were not mentally retarded nor destined to become so except as their motor handicaps prevented all expression of the natural development of their intelligence. As an initial step toward further research, twelve subjects whose mental deficiencies were associated with birth injury were chosen for study. Selection was based upon neurological diagnosis of cerebral injury, presumably sustained at birth, as the cause of the present condition, and upon available data as to family history, birth history and developmental history. Their motor disabilities were

enumerated. A classification of the subjects into two groups was made with a view toward precision in estimating the importance which may be attached to the injury at birth in the production of the later mental deficiency. In applying mental tests and measurements the Stanford-Binet Scale was first employed. The results obtained are interestingly presented and compared with further data obtained from these methods: The Meyers Mental Measure; The Goodenough Drawing Test; The Healy Pictorial Completion Test II; The Porteus Maze Test; The Witmer Form Board Test; The Ohio Literacy Test; The Detroit Word Recognition Test; and Morgan's Mental Test. In arriving at mental estimates, the authors have taken up three cases in detail, enabling us to follow their reasoning. The mental growth of twelve cases is presented and analyzed. Physical therapy was also employed in an effort to rouse and hold interest. A chapter is devoted to the etiology of birth injuries, giving the varieties, predisposing and causative factors and also the immediate and late symptoms of intracranial injury. The development of intelligence cannot be successfully evaluated except through speech and movement. The authors have interestingly put forward their pioneer efforts in a previously little enough considered field.

A TEXTBOOK OF EMBRYOLOGY. By Mary T. Harmon, Ph.D., Professor of Zoology in the Kansas State College of Agriculture and Applied Science, Manhattan, Kansas. 476 pp. 284 illust. Phila.: Lea & Febiger, 1932. \$4.25.

The first third of this work is devoted to early general embryology with particular emphasis on the human. It is simply written and is adapted to the beginning student. The bulk of the book treats of human organology. Its scope is extensive, but many of the organs are handled in a very superficial way. An appendix, serving as a laboratory outline, seems quite well adapted to the needs of pre-medical or pre-dental students.

W. T. D.

THE COST OF THE AFTERMATH OF WAR

(Editorial in Detroit Saturday Night)

It may surprise a lot of folks to learn that Uncle Sam is now giving free hospitalization, medical, surgical and nursing service to 680,000 men who were in the army during the world war. It will doubtless surprise them much more to be told that approximately 70% of the available beds in veterans hospitals are occupied by men with disabilities *incurred in civilian life*. These men are now costing the government \$75,000,000 a year, and one naturally wonders why they should have this service any more than any other citizen who has done his duty by his country.

It is a startling fact that although Great Britain had many times as many men wounded in the war than we did, we are today giving hospital care to nearly four times as many ex-soldiers as Britain is. (This statement is made on the authority of the *New York Sun*.)

So far, our war veterans have been paid, for relief, a total of \$6,000,000,000, or \$1,500 per man, from the U. S. treasury. And the lobbyists—who, to be fair to the veterans, are not all ex-service men—have clearly outlined a course of legislation that before the last soldier of the world war passes on, would set the government back over \$100,000,000,000.

Do you realize that the figure means the war would then have cost this country for relief alone \$25,000 per enlisted soldier? That is a prospect to make any thoughtful citizen shudder for his country's financial future.

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CONTENTS

Recent Advances in Community Prevention of Tuberculosis: Observations on 35,000 Students. D. S. Brachman, M.D., Dr.P.H.....	683	Editorial:	
The Significance of Circulatory Disturbance in Certain Psychoses After the Fourth Decade of Life. Theophil Klingmann, M.D., and H. S. Millett, M.D.....	694	The Annual Convention a Success.....	716
Fallacies and Merits of Sensitization Tests. George L. Waldbott, M.D.....	698	Malpractice	716
The Prevention of Symbplepharon. Report of a Case and Description of Appliance Used. Frederick A. Baker, M.D., and Bertil T. Larson, M.D.....	702	Unfair Competition.....	717
Endocrinology in Obstetrics. Robert L. Schaefer, M.D., and William L. Brosius, M.D.....	703	The Passing of a Pioneer.....	717
Epidermophytosis of the Hands and Feet. Arthur E. Schiller, M.D.....	705	Dr. Crane Honored.....	718
Syphilitic Cirrhosis of the Liver. Ralph L. Fisher, A.B., M.D., and James B. Blashill, A.B., M.D.....	711	Group Insurance	718
		A Leaf From an Old Account Book.....	719
		Advertising	719
		General News and Announcements.....	722
		Communication	723
		Obituary	723
		Proceedings—112th Annual Meeting, Michigan State Medical Society, Kalamazoo, September 13 to 15, 1932.....	724
		The Service of the Profession. Olin West, M.D.	763
		Society Activity	768
		County Societies	773
		Woman's Auxiliary	774
		The Doctors' Library.....	775
		Of General Medical and Surgical Interest.....	776

RECENT ADVANCES IN COMMUNITY PREVENTION OF TUBERCULOSIS: OBSERVATIONS ON 35,000 STUDENTS

D. S. BRACHMAN, M.D., Dr.P.H. †
DETROIT, MICHIGAN

Tuberculosis has cost the United States more lives and money than any other disease and, what is equally important, it continues to take its huge toll, though to a less degree. It has long been established that our hope in this condition lies chiefly in prevention rather than solely in treatment.

The ignorance and economic position of the public often lead to delay in diagnosis, delay in seeking treatment and sometimes refusal of prescribed routine care. It is apparent that the advanced case must once have been early, and early tuberculosis is curable. The people are afraid of pulmonary tuberculosis and unfortunately not afraid of the predisposing causes of this disease. Many of

them spend their leisure hours in an unhealthy manner and do not indulge in sufficient air, exercise and rest in their daily life, while their diet, though vastly improved, is still unphysiological. Further, though suspicious of pulmonary tuberculosis, they avoid a physician up to the last moment; for they realize that they may be sent away and possibly lose their employment.

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Like cancer and venereal disease, tuberculosis should be tackled early. In England, according to Edwards, only 14 per cent of the cases arrive at the sanatorium within

ease. In addition to infection with the germs there must be other factors at work which so alter the resistance that the frequently present bacilli can break through a

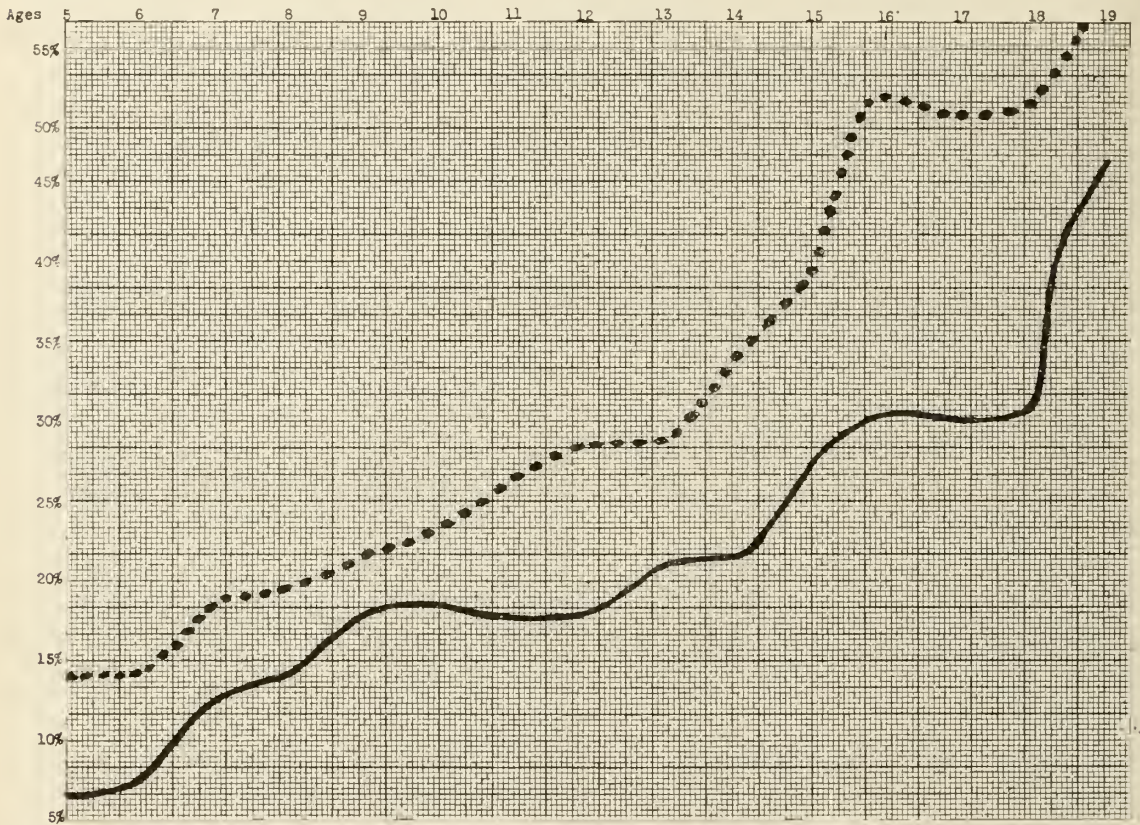


Fig. 1. Results of tuberculin tests in percentage for the various ages (white———, colored.....).

three months of onset of symptoms; a further 21 per cent within six months; 19 per cent within twelve months; and another 22 per cent within two years. Thus, 24 per cent do not enter the sanatorium until more than two years have elapsed. Two-thirds of the patients are advanced cases. Again, four out of five have tubercle bacilli in their sputum on admission. As recently as three years ago there was a long waiting list for beds here in Detroit and Wayne County (Michigan), and often an early or moderately advanced case became far advanced before a bed was procurable. At present, however, for the first time in our local history, there are sufficient beds for immediate hospitalization, due to the unceasing efforts of the Detroit Department of Health.

The cause of tuberculosis is the tubercle germ or bacillus, but this in itself, in the great majority of cases, fails to produce dis-

ease. These factors are conditions known as predisposing causes. Predisposing causes which lower body resistance are lack of sleep, overwork (mental or physical), lack of proper food, insufficient clothing, etc. Generally speaking, neither the exciting cause—the tubercle bacillus—nor the predisposing causes, can alone produce disease, but except in a small proportion of cases, a combination of the two must be present in suitable relationship and at an opportune moment. Unfortunately, there are almost unsurmountable difficulties in the handling of this disease which differ in many fundamentals from infections like typhoid fever, smallpox, diphtheria, et cetera.

Prevention of tuberculosis is possible in two chief ways—first, that of eliminating the possibility of infection as in typhoid fever; second, that of increasing resistance,

by personal hygiene, including social and economic reforms. The first is the ideal method but in our present civilization it is impossible of complete fulfillment. The best

We are now able definitely to select those requiring increased resistance in order to prevent breaking down with this disease. There is but a small factor of safety in man

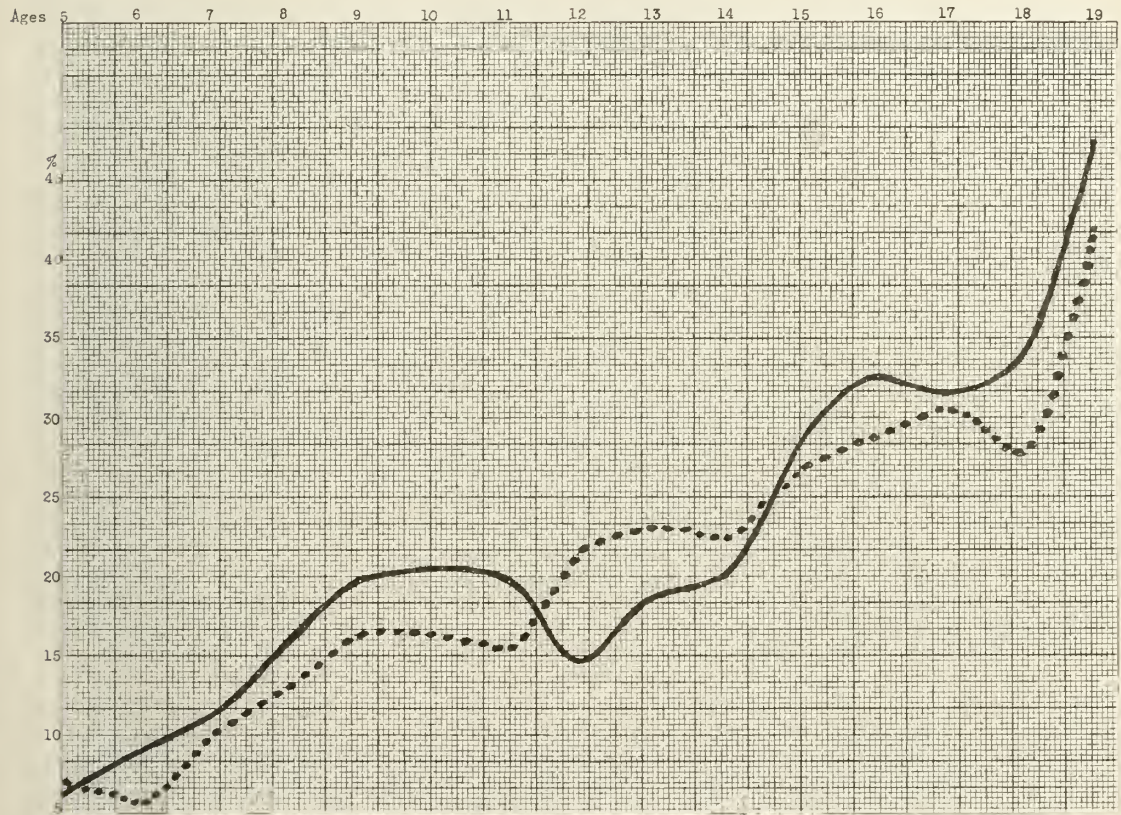


Fig. 2. Results of tuberculin tests in the white patients (male———, female.....).

practical results are procurable today by combining both methods.

Until recently most of the active anti-tuberculosis work was carried out with contacts of known active patients. This method is undoubtedly productive of best results as far as a large group of the population is concerned. However, many cases of active tuberculosis exist among the apparently well without any symptoms and hence unaware of spreading the disease to others. As these patients are not diagnosed, their contacts are not known and investigated. *This is the great leak* in the method used previously, which can be remedied only by thorough and persistent activities among the population generally. The second method, although in active use for many years, also has been but partially successful because it has not been employed to its full extent.

between immunity and susceptibility to tuberculosis.

The prevention program, in order to be successful, therefore, should include (1) diagnosis, isolation and treatment of those diseased, with examination of contacts as at present, and (2) work on a large scale on the apparently healthy. Our work deals chiefly with the latter group and hence is supplementary to rather than a substitute for the program until recently carried out by the various medical units.

The Tuberculosis and Health Society of Detroit and Wayne County has investigated, over a period of two and one-half years, more than 35,000 pupils. These include elementary, intermediate, senior high and college students in rural and urban areas, ages five to nineteen years.

As adult tuberculosis in the great major-

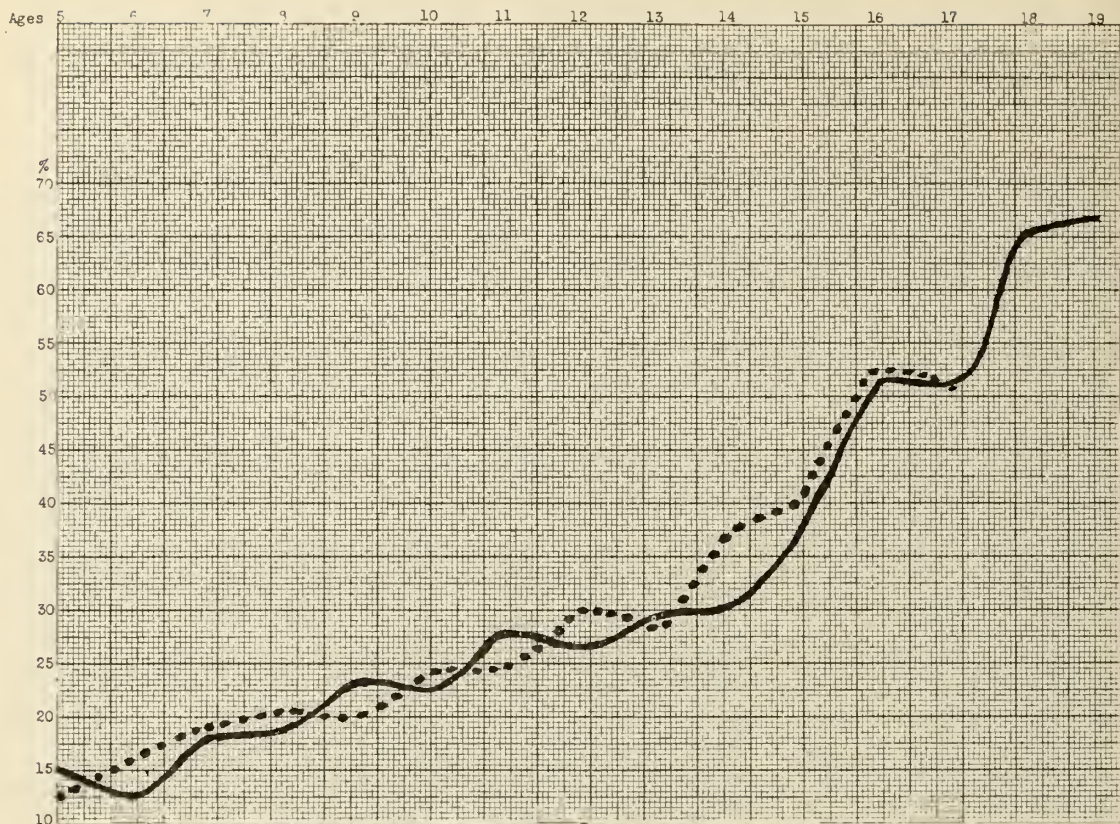


Fig. 3. Results of tuberculin tests in the colored patients (male———, female.....).

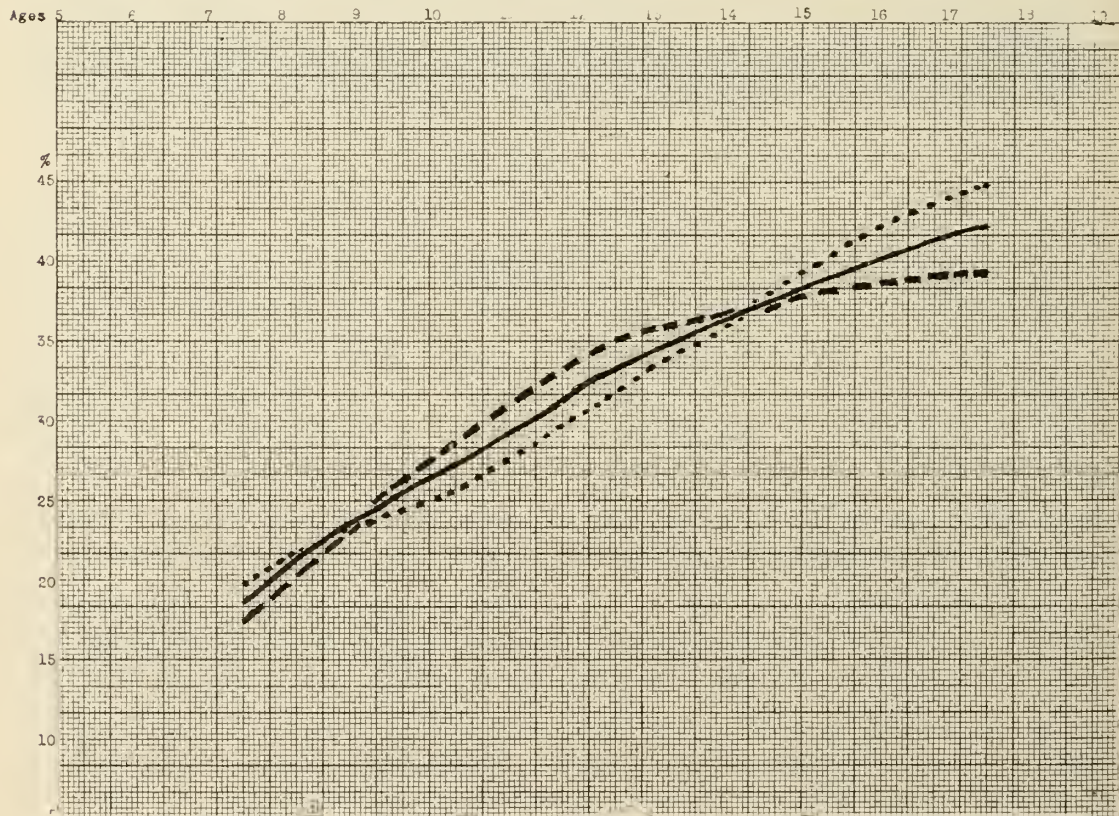


Fig. 4. Results of tuberculin tests in the county, mostly villages (male- - - - - , female....., total———).

ity of patients is the result of a breaking down of an infection in the earlier years of life, all pupils were first tested with tuberculin for the presence of tubercle germs.

in one sex or the other. This has been explained in different ways but our diagnosis, covering so large a number tested, tends to point very definitely to the fact that all

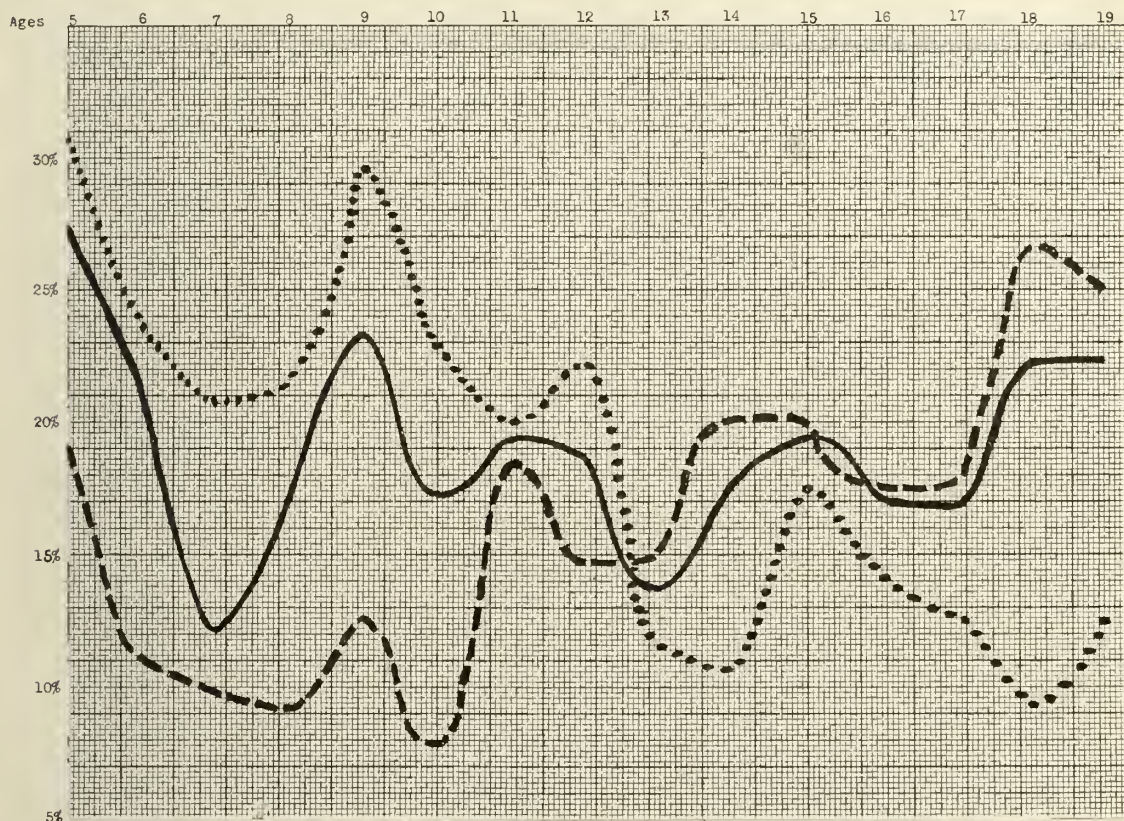


Fig. 5. Percentage of disease (mostly childhood type) found in tuberculin reactions (white-, colored- - - - - , total- ———).

Figure 1 shows the results of the Pirquet test in the students studied, giving the percentages of reaction in the white and colored. Figure 2 shows the results in the white according to sex and Figure 3 the same in the colored.

TABLE I. TOTAL RESULTS OF TUBERCULOSIS CASE-FINDING PROGRAM

	City	County	Total
Number of von Pirquet tests given	24,516	11,840	36,356
Number of von Pirquet tests positive	5,964 or 24.3%	2,969 or 25%	8,933 or 24.5%
Number of X-rays secured	5,334	3,222	8,556
Diagnosis:			
Childhood type	1,036 or 4.2%	504 or 4.2%	1,540 or 4.2%
Suspicious	322 or 1.3%	159 or 1.3%	481 or 1.3%
Adult type	38	12	50

It has been reported at various times that there was a higher percentage of reactors

things being equal, the reaction percentages are the same for male and female. One can see at a glance that the sex lines cross in Figure 4, showing results for the county schools, chiefly villages.

All students giving a positive tuberculin reaction were X-rayed. The results, classified as adult type tuberculosis, childhood type and suspect, according to Chadwick, are very interesting. Figure 5 shows the marked variations for the different ages. There was a small number of pupils studied in the age 5 group and hence the peak of the line is readily explained. The percentages for the other ages vary so considerably that it becomes apparent that the amount of childhood type disease, in any particular period of life, is dependent on many factors.² We know what some of these factors are but there is still a great deal to learn. It is striking in Figure 5 how the

male line, starting in the lower percentages, in the later years moves to the higher figures while exactly the reverse is true in the female. A further study will be made of this. Table II shows the percentages of disease found in the reactors, divided according to sex and color.

it shows we might be missing many cases by stressing contact alone.

In Table IV (A) all the diagnosed cases were made on original check. In the last 12 months there was only one additional case diagnosed—a pupil with tuberculous glands of the neck. As the total of members in

TABLE II. PERCENTAGE OF DISEASE FOUND IN THE REACTORS, GIVING AGE, SEX, COLOR

Age.....	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Per cent of total.....	27.4	21.5	12.1	17.4	23.4	17.3	19.4	18.8	13.8	17.8	19.5	17.0	16.9	22.3	22.3
White.....	19.0	11.1	10.1	9.3	12.6	7.8	18.4	14.8	15.3	20.1	19.9	17.6	17.7	26.5	25.
Colored.....	30.7	23.6	20.7	21.6	29.6	23.0	20.0	22.2	11.60	10.7	17.5	14.2	12.7	9.3	12.5
White															
Male.....	18.1	4.5	6.6	4.7	9.4	7.4	17.0	7.0	9.8	21.8	18.7	15.2	13.9	26.1	26.1
Female.....	20.0	21.4	13.7	15.1	16.6	8.3	20.0	20.3	18.7	18.9	21.4	19.9	21.6	27.2	22.2
Colored															
Male.....	30.0	25.6	23.4	24.2	31.0	25.6	16.0	15.6	11.5	18.1	25.4	21.4	14.6	11.1	10.
Female.....	31.8	40.6	18.1	19.2	28.2	20.6	24.6	27.2	11.66	6.4	12.7	10.3	11.3	5.8	16.6

Those diagnosed childhood type, also adult type, were referred to their respective physicians and those unable to afford a physician to the local Health Departments. In carefully checking up the required continued observation of the childhood type, we found very interesting results over a period of two and one-half years:

households is 2,109, there is an average of two adults and two children to each. Taking into account those that left the city, etc., we have an additional 112 households with 448 members. If this is added to 743 already examined, it totals 1,191 or 51.7 per cent of total members of households in which these children with disease were

TABLE III. ANALYSIS OF TWO AND ONE-HALF YEARS FOLLOW-UP OF 534 PUPILS HAVING TUBERCULOSIS (A)

Source of contact in household.....	124 or 23.2%
Previously diagnosed—	
a. By Dept. of Health.....	3
b. By Private Physicians.....	1
Number of families in which more than 1 child was diagnosed.....	18
Number without re-X-ray follow-up.....	81 or 15.1%
Hospitalized.....	35
Unable to locate.....	45
Left city.....	42
Deaths.....	4

TABLE IV. ANALYSIS OF TWO AND ONE-HALF YEARS FOLLOW-UP OF 534 PUPILS CONTINUED (B)

	Adults*	Children	Total
Number of people in the households.....	1046	1063	2109
Examined by Department of Health (after our work).....	195	347	542
Examined by Department of Health (before our work).....	86	115	201
Total examined in households.....	281	462	743 or 32.5%
Others in households diagnosed—			
Adult type.....	7	4	
a. (after our examinations) Childhood type.....	....	21	
Suspects.....	....	8	
b. (before our examinations) Adult type.....	30	9	
Childhood type.....	....	13	
Suspects.....	....	1	

*Adults include those sixteen years of age and older.

Many important points arise here for discussion. For example, though 23.2 per cent of the total gave a history of contact, in one large high school in which fourteen adult type or 1 per cent of the total examined were found, there was a contact history in only one. This, of course, was unusual but

found. This certainly speaks very highly, to say the least, of the follow-up work of the Detroit Department of Health.

In the high school age group we found 0.4 per cent adult type tuberculosis, 4.9 per cent childhood type and 1.0 per cent suspects. The childhood type percentages in

seven high schools are practically similar but in the adult type (by far the most important group) there is a marked contrast between the results in school B compared with the others. Fourteen adult type cases were found in school B. The findings in

school A, representative of the other schools, the adult type is well distributed. One is thus strongly forced to suspect that one or more students in house D are infecting others.

As the various adult type patients are

TABLE V. SCHOOL B: DIAGNOSIS ACCORDING TO HOME-ROOMS

	Home Room	Adult Type	Childhood Type	Suspects
Male.....	A	1	7	0
	B	1	7	3
	C	0	8	1
Female.....	D	7	20	9
	E	3	16	8
	F	2	12	5

TABLE VI. SCHOOL A: DIAGNOSIS ACCORDING TO HOME-ROOMS

	Home Room	Adult Type	Childhood Type	Suspects
Male.....	A	0	9	2
	B	0	8	0
	C	0	12	3
	D	1	12	3
Female.....	E	2	12	0
	F	0	12	0
	G	1	16	1
	H	0	6	2

TABLE VII. SCHOOL B: DETAILED FINDINGS OF THE ADULT TYPE

Patient	Classification	Nutrition and Development	Symptoms	Signs	Contact
1	IA favorable	Poor	—	—	—
2	IA favorable	Poor	—	—	—
3	IA favorable	V. good	—	—	+ (father)
4	IIA favorable	V. good	+ (1 year)	Sl. +	—
5	IIA favorable	V. good	+ (2 mos.)	+	—
6	IIA favorable	Poor	—	—	—
7	IIIB favorable	Fair	+ (2 mos.)	++	—
8	IA favorable	Fair	—	—	—
9	IA favorable	Poor	—	—	—
10	IA favorable	Fair	—	Sl. +	—
11	IA favorable	Good	—	—	—
12	IA favorable	Good	—	—	—
13	IA favorable	V. good	Sl. + (1 week)	—	—
14	IA favorable	Good	—	—	—

this group, as well as those in the other schools, were then divided according to their various houses or home rooms, as they are often called. It is according to such a classification chiefly that contact can be considered, for in all other groupings the contact is comparatively slight and particularly complicated, there being as many as 100 class rooms in one of the schools studied.

An outstanding feature in school B, as shown in Table V, is that House D has seven adult type patients, as well as a larger number of childhood type and suspects. Also the number of adult type, seven, is equal to the total found in the other houses. In

divided further, according to the degree of involvement, symptoms, signs, et cetera, it becomes apparent that such has been the case.

A complete physical examination, including history or symptoms and contact, was given the students whose X-rays showed evidence of pathological changes. Table VII gives the results of this examination in terms of general nutrition and development, symptoms, signs, contact history, and classification of disease. It will be seen from the data in this table that general development was good or fair in all but four cases. Definite symptoms of disease were found in

only three, a fourth student having a "cold" for one week only. As to physical signs, in only two was the evidence of disease definitely apparent, while in two others there

on the high school basket ball team at the time of diagnosis.

Six months later we procured another X-ray—shown in (b). Figure 6, with ap-

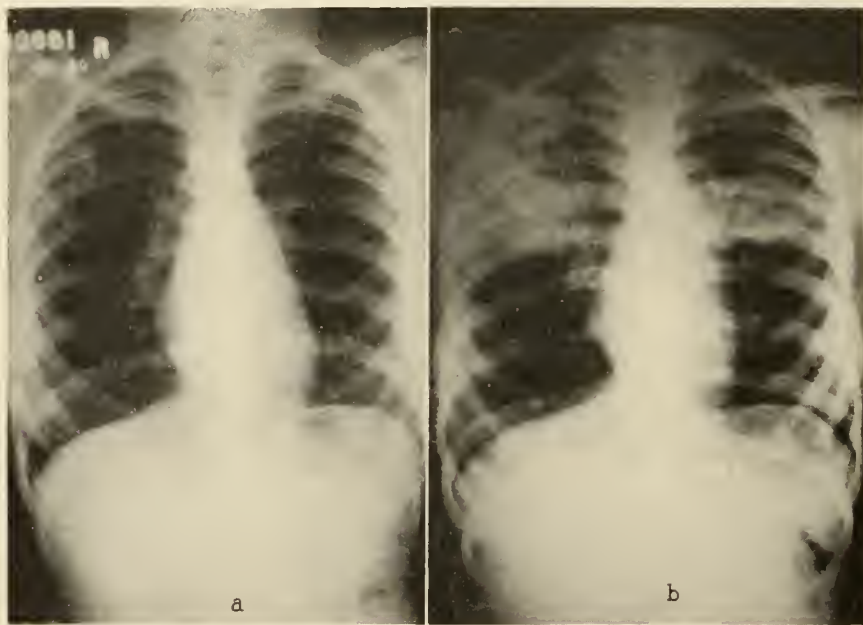


Fig. 6. Case 1. *a*. Scattered infiltrations first and second interspaces right, adult type tuberculosis. *b*. Extensive exudative infiltrations both lungs with beginning excavations right.

were slight signs ordinarily calling for further investigation. Another outstanding fact elicited was that only one of the fourteen students had a contact history. This is of course unusual, and will probably be corrected to a higher proportion as more cases are studied, and points further to the source being inside the school.

Recent advances in tuberculosis prevention, by the method of tuberculin testing and X-raying of the reactors, are shown in a practical way by Cases 1, 2 and 3. Case 1, a high school girl of fifteen, following a positive Pirquet test, gave the X-ray shown in (a), Figure 6. There was a definite minimal adult type tuberculosis and sanatorium care was advised. The girl refused to go because she "was not ill" and her mother sided with her as "she never had a day's sickness in her life." Repeated attempts in explaining to her mother the seriousness of the situation proved of no avail. The girl was, however, excluded from school and advised to stay in bed. Instead of at least carrying out this instruction, she played basket ball on the lots, having been

parent results. Now both the girl and her mother agreed to hospitalization because the girl "looked sick and was losing weight." After several months, however, the disease progressed to a fatal termination. Fortunately, though, the early diagnosis prevented the possible spread of the disease to her classmates by having her excluded from school. However, because she originally refused hospital care and did not isolate herself at home for the period of six months, she was a possible source of spreading tuberculosis to members of the household and to playmates outside of school.

In Case 2 the patient did not have a tuberculin test, her guardian refusing permission because there was "no history of tuberculosis anywhere in the family and the girl was perfectly well." Just a year later, at the age of seventeen years, she started coughing and losing weight and she was brought to her physician, giving the X-ray shown in Figure 7. It was agreed by radiologists that one year before the photograph was taken at the most there would have been only a lesion in the upper part of the left

lung. In other words at the time she was offered a tuberculin test, she would have been an easy case to cure for her own benefit and would not have remained a source of contact to the members of her household and her schoolmates and other friends.

Case 3, however, shows the other side of the picture and is much more pleasant to relate. This girl was on the school hockey team, her photograph shown in Figure 8 (a). She reacted to tuberculin and was accordingly X-rayed, Figure 9. Though it was difficult to induce her to go to a sanatorium, we finally succeeded, through the added persistent efforts of her mother, who "knew of a strapping young man dying from tuberculosis." The photograph in Figure 8 (b) shows this girl at the time of her discharge from the sanatorium with perfect results. By entering the hospital at once, she not only did what was best for herself but did not return to school or her home and family until no longer a source of contact to others.

SUMMARY AND CONCLUSIONS

Advancement in diagnosis deals chiefly with discovering tuberculosis at its very beginning, even before physical signs are detectable and frequently before there are any symptoms.

Tuberculosis sometimes has an acute onset but much more often the onset is very insidious, the disease becoming moderately advanced before the patient is aware of being ill.

Modern tuberculosis case-finding calls for tuberculin testing all children and adolescents and X-raying the reactors.

The diagnosis is made as adult type tuberculosis, childhood type, and suspect, the latter requiring a further X-ray in four to six months for a more definite classification. Adult type is the most serious and should be dealt with as the pathological involvement and general findings require.

All children diagnosed childhood type and found inactive should be X-rayed every six months till the age of twenty years. If activity starts, this method results in diagnosis when the disease is minimal, with beginning of treatment at a more favorable time.

The follow-up work is narrowed down to a workable list from which the future active patients are likely to follow.

All adults, particularly those up to the age

of thirty-five, should be X-rayed with or without a preceding tuberculin test and *irrespective of whether there are any symptoms or physical signs.*

A negative diagnosis in tuberculosis



Fig. 7. Case 2. Right lung: Dense exudative infiltrations level of second rib with beginning excavations. Left lung: Dense exudative infiltrations throughout infraclavicular region with beginning excavations and less dense infiltrations at base.

should not be made without a corroborating X-ray. The Detroit Tuberculosis Society's custom of giving health certificates to high school graduates on physical examination, will in the future include tuberculin testing and X-raying of the reactors.

In 1927 it cost the family and community \$10,000 to raise an average child to the age of eighteen. His value, in return, at that age has been worked out by Dublin to be \$29,000 and at the age of twenty-five—his maximum value—to be \$32,000. It is apparent, then, how large a financial saving—if one may for the moment talk in terms of dollars—a cure of adolescents would mean. Tuberculosis costs the United States 100,000 lives annually and millions of money.

In tuberculosis the X-ray is even more in-

dispensable than sputum examination and is necessary both in diagnosis and treatment.

Collapse therapy is more likely to be successful in unilateral lesions and when the

plete facilities to acquire knowledge of modern advancement in diagnosis and treatment of tuberculosis.

Suggestions.—A community prevention



Fig. 8. Case 3. *a.* Photograph taken as member of high school hockey team. *b.* Same girl on day of discharge from sanatorium.

duration of the disease is short. Early diagnosis is essential to successful medical and surgical treatment.

High school and college students should not be accepted for school teams without first undergoing the tuberculin test, followed by an X-ray if positive.

It is advisable that all X-ray societies adopt Chadwick's classification, resulting in standardization of terms that would be better understood by the general practitioner; full use be made of chest clinics as teaching centers, whether regular or traveling clinics, the latter particularly in sparsely populated areas; general practitioners be given com-

program against tuberculosis should include:

(1) A sufficient number of hospital or sanatorium beds to segregate all active cases without delay, removing the greatest source of contact.

(2) A hospital or hospitals efficiently staffed and equipped for modern surgical collapse treatment. Today a tuberculosis sanatorium is as active as a general hospital in surgical care, over 75 per cent of the patients requiring surgical collapse treatment.

(3) A health department large enough to (a) investigate all household contacts of tuberculous patients, adults and children, ex-

cept those able to have private physicians; (b) finance a general educational program to induce the public to be coöperative; (c) supply staff and equipped quarters for continued observation of those requiring it.

(4) Open air rooms in high and elementary schools.

(5) Active work among the apparently healthy by:

(a) Tuberculin testing all school children and X-raying the reactors.

(b) X-raying of all adults (with or without a preceding skin test in those over twenty-one years) before giving employment of any kind.

Note: Thanks are due to Mr. George F. Granger, Executive Secretary of the Society, for his foresight in seeing the value of the case-finding program; to Dr. Henry F. Vaughan, Commissioner of Health of Detroit, and his staff for complete coöperation, especially to Dr. Henry D. Chadwick, the Tuberculosis Controller; to the Detroit Board of Education and staff, especially Mr. George R. Berkaw, Supervising Principal, Open Air Schools.

Appreciation is here expressed for the active and often material help from the local Boards of Education and the local Health Officers in Wayne County, and the staff of the Leland After-Cure Farm. The County work was made possible by the thorough-



Fig. 9. Case 3. Infiltrations in the upper third of right lung and some fibrosis.

ness and keen interest throughout of Mrs. J. Johnson and Dr. H. C. Metzger.

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CLINICAL RESEARCH IN OTOLARYNGOLOGY

EDMUND PRINCE FOWLER, New York, emphasizes the fact that no matter how small or ill equipped with laboratory facilities, every clinic contains material which, properly examined and studied, will yield interesting and important information. Initiative by the worker is more important than material facilities. Too many patients put such a strain on the clinician that he has not sufficient reserve energy to initiate or carry on serious constructive investigations, and too elaborate laboratory facilities may blunt his faculties by engendering the habit of relying too much on them for diagnosis. If he does not engage in serious and continued investigation, the clinician suffers from lack of advancement in his study of disease and the patient from the lack of knowledge acquired therefrom. As an aid in facil-

itating clinical investigation the author presents a chart for recording observations. The advantages of such a chart are obvious. The answers to the preliminary questions may be recorded, and sometimes even satisfactorily obtained, by a secretary or assistant, thus relieving the examiner of some of the tedious and time consuming elements in the examination. The appellations, abbreviations and groupings further conserve time and space. The reverse side is left blank for recording observations that do not exactly fit into the standard form. The author believes that if one will use some such chart as it is designed to be used there can be no doubt that the labor entailed will some day be rewarded by the discovery of coincidences, coördinations, comparisons and accumulations of facts that mean something of importance, that constitute, in fact, a discovery in cause and effect.—*Journal A. M. A.*

THE SIGNIFICANCE OF CIRCULATORY DISTURBANCE IN CERTAIN PSYCHOSES AFTER THE FOURTH DECADE OF LIFE

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Beginning with the fourth decade of life the depressive psychoses are frequent and may arise in association with definite structural diseases as well as without discoverable lesions. During the involutional period, however, the degenerative changes of preëxisting disease or of advancing years become manifest physiologically, pathologically and psychologically. In the first instance there is a period of bodily readjustment because of changes in organic function of a certain kind, largely in the endocrine system; secondly, structural disease, of which the cardiovascular-renal type is the most prevalent; and thirdly, disturbance in mood, a change in disposition, either the result of the first or second factor or a combination of both, or a recurrence or exacerbation of a psychosis in an individual who has shown previous oscillations of mood earlier in life. In the last instance the situation is no different from the development of similar psychoses at other periods of life.

As has been pointed out, the involutional period brings with it the possibility of three different sets of factors which may cause mental disorders, the diagnosis and prognosis of which depend on the detection of those factors actually operative in any case under study. The problem presented is that of being able to recognize the presence of physical change indicative of structural disease. Therefore the diagnosis of the mental disorder on the basis of the psychologic factor alone should be by exclusion.

Of first importance is the patient's personality as the psychoses in question are personality reactions to situations which confront the patient and frequently to organic disease.

The most striking feature of the psychoses of this period is a state of agitated depression of acute or subacute onset. The most frequent apparent cause is a disquieting social situation (as an occupational failure, a death in the family, or social discord of different types) which often overshadows all other less apparent basic causes.

Ideas of hopelessness, ruin, and sin asso-

ciated with somatic delusions with a marked tendency to commit suicide predominate.

CLASSIFICATION OF PSYCHOSES OCCURRING THE FOURTH DECADE OF LIFE OR THERE- AFTER—ACCORDING TO CERTAIN BASIC FACTORS

Pathological—Physiological—Psychological

A. *Pathological*

- I. Cardiovascular Disease (119 cases)
 - *1. Myocardial insufficiency (106)
 2. Endocarditis with decompensation (4)
 3. Aortitis (syphilitis) (2)
 4. Cerebroarteriosclerosis with hypotension (4)
 5. Cerebroarteriosclerotic thrombosis (2)
 6. Angina pectoris (1)
- II. Respiratory (9 cases)
 1. Tuberculosis (3)
 2. Bronchial asthma (2)
 3. Tonsillar abscess (2)
 4. Accessory sinus disease (2)
- III. Gastrointestinal (10 cases)
 1. Appendicitis (3)
 2. Malignancy (3)
 3. Teeth—apical abscess (4)
- IV. Genito-urinary (14 cases)
 1. Uterus and appendages (infection) (4); malignancy (2)
 2. Chronic kidney disease with hypertension (8)

B. *Physiological*

- V. Endocrine dysfunction or hyperfunction (26 cases)
 1. Menopausal manifestations (19)
 2. Thyroid hypofunction (3); hyperfunction (4)

C. *Psychological*

- VI. Primary Psychoses without demonstrable pathology (27 cases)
 1. Manic depressive types
 2. Schizophrenic types

The analysis of two hundred and five (205) case records of patients suffering from psychoses occurring in the fourth decade of life and thereafter revealed that 152 (74 per cent) of the individuals developing

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*This group is the basis for this essay.

psychoses in the fourth decade of life have structural changes in various organs sufficient to cause permanent mental and physical disability. One hundred and nineteen of this number (58 per cent) suffered from chronic cardiac disease, which is a slightly higher number than that occurring in a general hospital. One hundred and six of this number (52 per cent) suffered from chronic non-valvular cardiac disease.

CLINICAL PICTURE OF PSYCHOSES ASSOCIATED WITH MYOCARDIAL INSUFFICIENCY OR CHRONIC NON-VALVULAR HEART TROUBLE

Physical:

1. Subjective
 - a. precordial distress (usually a feeling of pressure or weight)
 - b. sighing (mild dyspnea)
 - c. fatigue
2. Objective
 - a. dyspnea
 - b. Mild cyanosis of the face, hands and feet and also of the mucous membranes
 - c. small volume of the pulse
 - d. apex beat not visible or palpable
 - e. heart sounds weak
 - f. blood pressure normal or low

Mental:

1. Subjective
 - a. fear
 - b. hopelessness
 - c. somatic delusions
 - d. suicidal tendencies
2. Objective
 - a. anxiety
 - b. dejection
 - c. agitation
 - d. mild confusion
 - e. insomnia

There were only twenty-seven patients in the whole group studied that were purely psychotic, that is, free from structural disease. Twenty-six of the 205 patients had a glandular imbalance and were placed in the physiologic group.

The group composed of 106 cases and classified under chronic non-valvular cardiac disease or myocardial insufficiency is the basis of this essay and to illustrate we will cite four typical cases:

Case 1.—A small, slight built woman, forty-one years old, whose appearance was much younger, came under observation April 24, 1930. In the past year she had visited several of the large hospital clinics, but without satisfactory results. The reports from these clinics showed that the results of the examinations were essentially negative. The onset of the psychosis was eight weeks prior to her admission here.

The patient expressed fears with reference to malignant disease, especially cancer, and when assured that it was not cancer she suggested pernicious anemia, tuberculosis and syphilis. Precordial distress was a constant complaint. With this

there were frequent attacks of tachycardia with dyspnea. At such times she became agitated, showed great anxiety and fear of death. During the intervals she was continuously depressed and frequently stated, "There is no hope for me." She attempted suicide by cutting her wrists. While the injury was not severe and the wounds healed promptly, she persisted in suicidal attempts by swallowing safety pins, broken matches and pieces of a clinical thermometer in the hope that this might bring about a fatal result. The foreign bodies were demonstrated by a roentgenogram. The agitated depression with the ideas of hopelessness continued in the fourth week of hospitalization.

The physical examination resulted in negative findings except for deeply buried septic tonsils and cold, cyanosed hands and feet with a marked hyperidrosis of the palms and soles and the pulse rate varying between 100 and 120 per minute. The blood pressure was 112/62 with no marked variations. The heart sounds were clear and distinct and no enlarged precordial dullness apparent. The laboratory findings and the roentgenological examinations of the chest were negative.

The neurological findings were indefinite. The pupils were equal, reacted to light and in accommodation, but were continuously dilated. The tendon reflexes were brisk. Otherwise this examination was negative.

Mentally she was constantly active, restless during the day and sleepless at night. She was always oriented, showed no memory loss and had good contact with her environment. There were persistent somatic delusions. She had no confidence in our attempts to relieve her and was more or less uncooperative.

The previous medical history gives information that the patient had had a mild mental upset fifteen years ago and had medical treatment for three and one-half years for various complaints of the gastrointestinal tract. At the age of 12 years she had an appendectomy. The menstrual periods have been scant in the last year. She was married at 22 years. There have been no pregnancies.

Her early life was apparently normal. She is the youngest of seven children, graduated from high school and was active as a business woman until she was married.

Her father was accidentally killed. The mother is living at the age of eighty. One sister is suffering from dementia præcox and one brother died of typhoid fever. One cousin has a chronic psychosis and one brother died of cancer. Two sisters and one brother are living and well.

The patient returned home at the end of the eighth week apparently recovered. She returned two weeks later somewhat depressed, complaining of fatigue, and she appeared languid. There was a persistent elevation in temperature ranging from 100° F. to 101° F., pulse 120 with a leukocytosis of 15,700. The physical examination was negative except for septic tonsils. Tonsillectomy was advised. On this occasion the patient became agitated and showed considerable fear. She refused the advice saying: "I could not go through with it. My heart will never stand it and I will surely die," but after reassurance she consented and a tonsillectomy was successfully performed. There was little reaction and she seemed generally more comfortable until the sixth day after the operation when she was suddenly taken with precordial pain, tachycardia and dyspnea which continued until she died three hours later.

The autopsy revealed changes significant and characteristic of the clinical picture, but not sufficient to prove the cause of death. The heart was relatively small, there was some dilatation of the right

side, the myocardium thin, the coronary arteries were not materially changed. The aorta was very small, being 4.2 cm. in circumference. There were no atheromatous patches or plates and no occlusions or calcifications. The sections of the myocardium show separation of the muscle bundles with fragmentation, but no fibrosis.

The examination of the brain showed a moderate degree of congestion of the meninges with an edema of the posterior superior aspect of both hemispheres. No softening, or tumor formation and no thrombosis or aneurysms; in fact, nothing was apparent in the brain that had any bearing on the original clinical findings. While the patient evidently died from an attack of angina pectoris, the post-mortem findings were not positive.

Case 2.—A stout built man (weight 214.5 pounds, height 70.5 inches), aged forty-eight years, was admitted December 12, 1930, complaining of dizziness, fatigue on slight exertion accompanied by profuse perspiration, mental depression, emotional instability and loss of memory for recent events. He feared that he would lose his mind. The present illness followed an "attack of sciatic rheumatism" about a year ago. Since then he had been unable to follow his occupation as a mechanic and became hopeless with reference to recovery.

Clinically he presented a general paleness of the skin with slight cyanosis of the extremities. The pulse was of small volume, pulse rate 110. Blood pressure 110/70, respiration 22 and slightly labored. The heart sounds were weak but there were no thrills or murmurs. There was no sclerosis of the radial arteries and no angiosclerosis of the vessels of the eye fundi. The examination of the urine, blood and cerebrospinal fluid gave negative results. The X-ray of the chest showed no enlargement of the heart. The neurological examination was entirely negative. Mentally he appeared dejected, was emotionally unstable; he wept without apparent provocation and expressed ideas of hopelessness. He was well oriented and there was no loss of memory for recent or remote events. He was constantly agitated during the day and sleepless at night.

The clinical picture presented by this patient is that of a psychosis of the affective type and the physical signs might easily be interpreted on this basis. The treatment of this patient began on December 15, 1930, and he was discharged apparently recovered on January 9, 1931. He reported in the out-patient department on January 30, 1931, that he had returned to his occupation and that he is as well as ever. His weight was reduced to 195 pounds; the blood pressure was 140/70; the pulse of good volume and 80 per minute.

Case 3.—A woman sixty-three years old was admitted for treatment February 8, 1931, complaining of exhaustion, mental depression and sleeplessness. She stated that she becomes easily fatigued and any attempt at work required great effort. This fatigue came on about four months prior to the admission to the hospital and she was not depressed until about two months later. During the first interview she exclaimed, "Oh, Lord, call me and take me away from this suffering. How long will this last? Won't this ordeal soon be over? I am so tired; if I could only die and end it all." This hopelessness and agitated depression were continuous during the day. The patient had good contact with those about her. She was well oriented and her memory was good. While in bed she sighed frequently and complained of precordial distress which she sometimes spoke of as a pressure. There was some dyspnea. The pulse was of small volume and the heart sounds indistinct and weak. The blood pressure 100/90. The peripheral vessels showed moderate sclerosis

and the eye fundi some angiosclerosis. The neurological examination was negative. The laboratory findings were not significant. The previous medical history reveals that she had a mental upset in 1916, 1922 and in 1924, each of several weeks duration and without hospitalization; she made good recoveries. There was no evidence of physical illness at these times and the mental manifestations were those of sleeplessness at night and restlessness during the day without marked mental depression. The patient has had no serious physical illness and she passed an uneventful menopause in 1918.

The family history is negative except that her mother died of heart disease at 53 years of age. The patient was normal in her social life. She was married at 26 years, has one son 36 years old and well.

Case 4.—A slight built man, aged sixty, a farmer, was admitted on February 17, 1931. He complained of being nervous, depressed, sleepless and dizzy. This condition came on after an unsatisfactory business transaction two months ago. Since then he has been continuously agitated and depressed, going about the house bemoaning his plight. He took very little food and had lost considerable weight. He made no attempt to apply himself on the farm.

At the time of admission the patient was confused and his memory for recent events was poor. He could give little information regarding the events in the past month. He was continually agitated, moaning and wringing his hands and his facial expression was that of great anxiety. He was mute and gave no attention to those about him. The physical examination showed that the patient was generally cyanosed, especially the face, hands and feet. The tongue was heavily coated, the mouth dry, and the breath foul. The pulse was of small volume, the peripheral vessels slightly sclerosed, the heart sounds weak, the apex beat not visible or palpable; the blood pressure 105/65. In the urine there was a trace of albumin but otherwise negative. The blood examination showed R.B.C. 5,120,000; W.B.C., 7,800; Hemoglobin 85 per cent, and blood sugar 100 mg. per 100 c.c. The neurological examination revealed equal pupils, but they were sluggish to light and in accommodation. There was a drooping of the left angle of the mouth, a fine tremor of the lips and tongue and of the extended hands. The station and gait were unsteady. The knee jerks were decreased, the left Achilles jerk absent and the right diminished. The umbilicus, cremasteric and left plantar reflex were absent. The cerebrospinal fluid examination showed: cells, 2; globulin, plus 1; sugar, trace; colloidal gold, negative; Kahn test, negative. Prior to the present illness this patient had malaria fever at the age of twenty and typhoid fever at thirty.

He attended country school until he was 16 years old and the following year went to a business college. Since then he has been active in general farming. He married at twenty-eight. There are two sons—both active in business and successful. The father of the patient died of heart disease at seventy-eight. One sister died of cancer of the stomach at forty-five. Two brothers older than the patient are living and well. One sister is living and well.

The patient returned home apparently well at the end of the fourth week. He reported at the hospital two weeks later saying that he was well and that he was ready to go to work. However, he was advised to continue the schedule outlined for him when he was discharged from the hospital. He disregarded the advice and resumed his usual occupation. Four weeks later he returned to the hospital de-

pressed and hopeless, complaining that he could not sleep and was "dazed" during the day. He was admitted to the hospital and the treatment resumed.

On admission the examination was essentially negative, but his pulse was small and the heart sounds weak. The blood pressure was 100/70. After two weeks treatment his blood pressure was 130/70 and he returned home a wiser man. Since then he has resumed his occupation with limitations, and is in good health.

In analyzing these cases they have in common definite physical and mental signs and symptoms and a uniform result from the treatment.

In the first case reported it appears that the feeling of hopelessness was well founded, inasmuch as the patient was suffering from a fatal illness. Yet most of her delusions had no corresponding somatic basis except the anoxemia, and no doubt this is the basis for the sense of physical illness in all of the cases. This case illustrates the difficulty in the diagnosis of certain heart conditions, especially when overshadowed by a serious psychosis. The question arises—was it possible to make a clinical diagnosis of cardiovascular disease in this case?

The second case is typical of the group which we have classified as chronic non-valvular cardiac disease and a favorable prognosis could be ventured in the beginning with reference to the psychosis.

Less favorable were the other two cases; the third because of the history of repeated psychotic incidences, and the fourth because of evidence of degenerative changes in the vascular system. However, we have learned that sclerosis of the arteries does not necessarily indicate an unfavorable prognosis of the psychosis. At this point we confess that the basis for the classification of myocardial insufficiency or chronic non-valvular cardiac disease and the surmise that this is directly or indirectly the causative factor of the psychosis, is the therapeutic result, which it has been our good fortune to find nearly one hundred per cent.

The treatment which has brought these results is wholly directed toward the improvement of cardiovascular tone, consisting of rest with digitalis and a gradual return to a modified amount of activity.

Rest in bed is continuous for two weeks. During this period 1 c.c. of tincture of digitalis three times daily after meals is given. Patients who are uncoöperative and refuse medication by mouth are given the equivalent by the hypodermic method. At the end

of the two weeks period it may be expected that the psychosis is sufficiently relieved so that the patient may be dressed and taken out of doors to walk for 15 minutes each morning. This is increased five minutes each day until a one hour period is reached. During this time the patient remains in bed except when exercising. Continuing with the hour period, a second period is started in the afternoon, beginning with fifteen minutes, increasing the time five minutes each day until an hour is reached. At the end of this time the patient is allowed to be up and about all day with the exception of a two hour resting period after the midday meal. He is expected to rest not less than nine hours each night. When the patients are discharged from the hospital they are advised to continue a daily dosage of digitalis, the equivalent in digitalis value of 0.1 grain of powdered leaves. Some patients will not tolerate 0.1 grain per day; they should have the amount in accord with their determined tolerance. The exercise is continued indefinitely; the walking may in part be supplanted by the activities of the patient's occupation, but both mental and physical activities must be adjusted in accordance with the patient's ability when he leaves the hospital. After this he is still under medical supervision, either in the out-patient department or in the care of the local physician.

In connection with the physical aspect of the treatment of this type of psychosis we are fully aware of the fact that this type of patient may adjust the mental disability within the space of time required (which was not more than forty-four days) in the hospital environment with the other feature of the treatment, but no attempt was made to readjust the patient's abnormal mental activities. From the available evidence it is difficult to construct as yet an accurate and detailed picture of the sequence of events in the progress of circulatory failure. A concept, therefore, which attempts to correlate the clinical picture with the functional and structural changes in these cases can be at its best but incomplete, although the results of the treatment in the 106 cases thus classified appeared to be on the basis of cause and effect.

Clinical and experimental observations* have proven that, aside from the primary disorders of the nervous system or chemical alterations of the blood, cardiovascular dis-

orders are chiefly responsible for the symptoms of dizziness, syncope, convulsions and related manifestations, and that anoxemia of the cerebral centers resulting from a pronounced fall of systemic blood pressure is the underlying cause. The cells of the cerebral cortex are extremely sensitive to a diminution in its supply of oxygenated blood and react promptly by manifestations of vertigo, exhaustion, and unconsciousness. Since the arterial blood supply is dependent on systemic pressure, any of the factors known to reduce arterial pressure, such as reduced systolic discharge, lowered peripheral resistance and decreased heart rate, and consequently reduced venous return, can diminish the cerebral blood flow to a degree lower than is necessary to maintain cerebral function.* Hypotension was a constant and persistent manifestation in all of the patients of this group. The highest systolic pressure was 123 and the highest diastolic pressure 78. The lowest systolic pressure was 96 and the lowest diastolic pressure was 58 at an average age of fifty-six years.

While symptoms of dizziness and fainting are commonly associated with circulatory disorders that diminish the cerebral blood

flow they are rarely associated with the more serious valvular cardiac disease. In these conditions the impairment of the blood flow leads to psychic phenomena of a different sort; a more or less continuous mental stupor, impaired memory, disorientation and hallucinations of sight, hearing and smell are the more common manifestations. There is a mental dulling en masse, a lack of realization.

In the non-valvular type of cardiac disease the symptoms and signs are often the expression of an altered balance rather than absolute deviation from normal, while in the valvular type they are significant of marked structural deviation and the physical manifestations referable almost entirely to local disturbance in cardiac function, the main symptom being dyspnea. In this stage the patient is comfortable at rest and develops circulatory embarrassment only after exertion.

Conclusion.—One hundred and five psychotic patients recovered from the psychosis within a period of forty-four days, the result of treatment directed toward cardiac stimulation, rest and modified physical and mental activities, without any attempt to adjust the abnormal mental manifestations.

*Carl J. Wiggers, M.D. Jour. A. M. A., Feb. 21, 1931, Vol. 96, No. 8.

FALLACIES AND MERITS OF SENSITIZATION TESTS*

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Since the introduction of sensitization tests there have been many enthusiastic advocates of this method, whereas many others have obtained no satisfaction whatsoever. Utterances such as this are typical: "After having used my set for two years, I had to discard it because not a single patient was benefited by it." "I had 200 to 300 tests by six different specialists and I still have my asthma." "All the tests are negative; it therefore can't be allergy." Because the wrong interpretation of skin tests may be of great damage to the cause of allergy and thus to the allergic patient, I shall endeavor to point out some of the most common fallacies on this subject.

Probably the most common mistake made is the identification of skin reactions with sensitization. In other words, some believe that the degree of skin reactivity parallels that of clinical sensitization as such. As a result of this idea, the conception that skin tests are the most important or even the only

necessary procedures in the management of the allergic patient is widespread. It has been well demonstrated by Rowe,¹ Walzer,² Peshkin,³ and Alexander⁴ and many others that a patient may be very sensitive to certain substances and not give the slightest positive skin reaction at any time. On the other hand, a positive test may often be non-specific and thus be exceedingly misleading.

In patients of long standing asthma,

*Lecture given under the auspices of the University of Michigan, Department of Post-Graduate Medicine, June 10, 1932, at Children's Hospital, Detroit.

negative tests are the rule rather than the exception. In old age as well, we usually fail to obtain conclusive positive reactions. In my own experience, I have often encountered negative skin tests very shortly after asthmatic attacks and, therefore, I avoid giving tests at this time. Furthermore, I have had occasion to find negative skin tests after an anaphylactic reaction encountered following an injection of antigen.⁵ In the determination of sensitiveness to horse serum before a therapeutic injection, negative tests are often obtained in spite of definite sensitivity.⁶ Old extracts give less accurate results than fresh ones and may thus account for negative results. Another point of importance is the fact that the extract may be applied in a different form than in that in which it is clinically active. Thus for instance, a raw food may give an entirely different reaction than the same food after cooking. In addition a greatly diluted extract may not produce a wheal although the material may clinically be offensive. Another source of negative tests is often the administration of epinephrin or ephedrin previous to the testing. These drugs may produce at least a partial temporary loss of the capacity of the skin to react. Testing with numerous drugs which clinically produce sensitivity has occasioned frequent failures, a fact which is in accord with recent investigations on drug sensitivity. There are so-called delayed reactions occurring several hours after the tests which usually appear to be negative at the time of testing. According to clinical experience, although not yet experimentally proven, this is due to continued absorption of antigen, which creates a temporary state of non-reactivity of the skin.

It is generally known that materials such as histamine produce a positive reaction in every individual whether sensitive or not. The presence of histamine or similar substances in the testing fluid of various antigens undoubtedly accounts for a great many non-specific positive reactions. For instance, I have tested a group of female patients with several internal gland products, some of which, especially antuitrin, produced an allergic wheal in every patient tested. Strongly concentrated foods, especially fish, have given positive reactions in normal individuals. Skin tests with bacterial proteins, I have never regarded as very conclusive in my work although there is no

question as to the great importance of bacteria in the causation of asthma or other allergic diseases. I have tested approximately one hundred individuals with various fungi and yeasts grown from their sputum. In interpreting the results, I encountered great difficulties because of the apparent non-specificity of the tests.

It should be borne in mind that the skin of certain individuals is unusually susceptible to mechanical irritations and actual wheals with apparent pseudopods may occur in all reactions, although clinically the antigens employed in the tests do not produce symptoms. Certain skin areas show positive reactions more readily than others. For instance, near the elbow the reactions are larger than near the wrist.⁷ Positive tests in the proximity of a marked wheal may have to be considered non-specific even though they may appear to be very definite. In eczema and urticaria a great deal of caution is thus required in the interpretation of the results.

Even if we do encounter a specific reaction it does not necessarily follow that the patient will show symptoms upon contact with these substances. The positive test is merely an indication that at one time or another the material has been offensive to him or that in the future he may develop symptoms from contact with it. A positive reaction may therefore be not only an indicator of present and past sensitivity but also may designate that the antigen is a potential cause of future trouble.

In general practice the method of choice is the scratch method. While an intracutaneous test may or may not be slightly more sensitive than a scratch test, its use can hardly be recommended to the general practitioner on account of the fact that dangerous and even fatal reactions may ensue. Furthermore, it is exceedingly difficult and costly in practice to have all the required equipment and fresh materials on hand.

Whether to use powdered extracts, fluids, or antigens in ointment form, is of no material consequence. From comparison of all three types, I feel that fluid extracts are probably the most reliable ones provided that they are fresh. They are particularly well suited for pollen tests. The fluids, however, seem to deteriorate much easier than the powders. The pastes also are somewhat more difficult to preserve than the

powders, especially during the warm season. Many allergists prefer the powdered extracts which may be dissolved in 1/10 normal sodium hydroxide solution for scratch testing.

There are a few points regarding the technique which deserve emphasis if one wishes to have reliable results. I do not use disinfectants to sterilize the skin because of their possible interference with the reading, especially in cases with urticaria. The arm should be thoroughly cleansed with soap and water before the testing. The scratches should be of equal length, about 0.5 cm., not too deep into the skin and should not draw blood. They should be an equal distance apart, preferably 3 cm. so as not to interfere with each other. They should be read after fifteen minutes and again checked ten minutes, six and twenty-four hours after the antigen has been wiped off with water. If there are very marked reactions which appear already two or three minutes after the application, it is wise to remove the material as soon as the wheal appears, since generalized reactions may occur after such tests. Control tests are not required because some definitely negative tests are always obtainable for comparative purposes. If this is not the case, the testing cannot be relied upon. In patients whose skin is unresponsive, even a very small rise of the skin in excess over the others should be regarded as a positive reaction. These border line "plus-minus" reactions have proven to be of extreme value in the management of some of my patients.

One of the most baffling problems is the question of which materials to use. At present, we can well say that any substance may be the source of allergic symptoms, whether it contains protein or not. Landsteiner⁸ has shown that a simple chemical substance such as tartaric acid combines with a certain material of the blood into a so-called complex antigen. Avery and co-workers⁹ showed that a carbohydrate substance is the main factor which determines the antigenic property of certain bacterial products. I have recently reported cases of sensitization to such simple chemicals as ether, urethan-quinine, ephedrin, sodium iodide, et cetera.¹⁰

While everything in our surroundings may thus have to be taken into consideration, for routine purposes, we must, of course, confine ourselves to those materials

with which the patient has daily contact. Among the pollens, there is only a very limited number in Michigan which are always present in the air during their respective seasons.¹¹ They are short and giant ragweed, cocklebur, marsh elder, and wormwood in fall; June grass, timothy, orchard grass and red top in spring; the common trees, especially maple, pine, oak and elm in early spring; and English plantain, lambs-quarter, rye, and yellow dock during the summer. It is futile to test patients for roses, cosmos, goldenrod and other flowers because they only produce symptoms upon direct contact with the flowers. Their pollen is surrounded by a resinous moist hull which prevents them from being carried by the wind. A positive reaction to these pollens as a rule merely indicates a previous contact, but does not mean that any therapy should be instituted.

Among foods, those most commonly eaten are wheat, eggs and milk, especially in children. Fish, tomatoes, spinach, cheese, peanuts and strawberries seem to be more offensive than others even if eaten in relatively small quantities. However, any food other than the above has to be considered as an equally important factor in the individual case.

Since horse hair, wool, cotton, kapok, feathers are in or about the bed and may thus account for nightly attacks, and since cattle hair, rabbit hair, dog hair, and camel hair are in the upholstered furniture of nearly every room, they should be included in each testing set. Orris root in powders and perfume articles and pyrethrum in insect and garden sprays is of equal importance. It is advisable to test every patient with an individual or stock house dust extract.

I have recently tested a large number of patients with patented foods* such as grape nuts, Quaker oats, et cetera, and the various baby foods. From the results obtained, I believe that such tests are of distinct value in individual patients, since they differ from the substances from which they are made. I have for instance, observed that rice flakes give a somewhat different skin reaction than rice.

Since skin tests cannot be considered entirely reliable in determining the causative

*Prepared by the Barry Allergy Laboratory, Detroit, Michigan.

agents, various means have been devised to aid in their detection. Probably the most important one is the passive transfer test which has been elaborated by Walzer.¹² It is based on the fact that skin reacting antibodies, so-called "reagins" which are present in the serum of allergic patients are easily transferable to normal individuals and produce there very definite reactions upon their contact with the antigen. It is therefore necessary to inject in a normal individual a number of sites of the forearm with the serum of the allergic patient, and after the lapse of 48 hours, to test these sites with the various antigens, preferably interadermally.

The patch test has been devised especially for dermatitis cases. It consists of the application of the suspected substance upon the skin, held in place for twenty-four hours by means of a small linen square which is attached to the skin with adhesive tape. If the test is positive a more or less marked erythema or an actual localized dermatitis may occur on these sites.

The conjunctival test is used, particularly in pollen-sensitive cases with negative skin tests, by applying small amounts of dried pollen into the patient's conjunctivæ. As a rule within five minutes a more or less intense conjunctivitis arises which can be immediately controlled by one drop of epinephrin after the removal of the powder from the eye. While all these methods may sometimes be of very great value, they can only be regarded as an aid in the management of the case. Such means as the taking of a very thorough history, the food diary, elimination diet, and observation of the case, particularly of the response to desensitization treatment, are of foremost importance.

SUMMARY

In allergic patients sensitisation tests should not be regarded as a definite indicator of clinical sensitivity.

Negative skin tests in the presence of clinical sensitivity occur in cases with long standing asthma, in old age, occasionally after asthmatic attacks, after an anaphylactic reaction, with old extracts, and after administration of epinephrin.

Unreliable positive tests were observed with too concentrated solutions, with extracts containing histamine or like substances, in patients with sensitive skin, near the site of a wheal, with bacterial products, fungi, and certain internal gland products.

Border line ("plus-minus") and delayed reactions are of greatest importance in patients whose skin is little responsive to the testing.

10 PETERBORO

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EXPERIMENTAL AIR EMBOLISM OF THE CORONARY ARTERIES

GEORGE RUKSTINAT, Chicago (*Journal A. M. A.*, Jan. 3, 1931), states that dogs whose coronary arteries are plugged with air die promptly. In such animals and also in human beings dying of air embolism, there are no lesions demonstrable anywhere to explain death unless an exception is made of the presence of air in the blood. In air embolism of the

coronary arteries, either recovery or death takes place promptly. Direct cerebral air embolism through the carotid arteries is succeeded by cerebral irritation which does not develop in dogs with solely coronary air embolism, although both may have apparently similar amounts of air in their leptomeningeal vessels. Delayed cerebral air embolism was not observed in dogs recovering from coronary artery air embolism.

THE PREVENTION OF SYMBLEPHARON. REPORT OF A CASE AND DESCRIPTION OF APPLIANCE USED

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The prevention of symblepharon is difficult and in severe burns impossible in most cases. Constant separation of the lids to prevent adhesion is well nigh impossible and the numerous other methods in use unsatisfactory.

The use of fats, while of benefit, does not prevent. Stitching back the lids, as practiced by Hurst, is of little value in severe acid burns when the fornix is involved. Ball of Iowa reported in the London Lancet, April, 1926, the use of a silver plate which he sewed to the lower lid. This would obviously be of little use when the upper lid is burned.

E. V. Hughes, in the British Journal of Ophthalmology in 1927, described a wire frame which was used in lower lid burns. He placed upon the lid gold beaters' skin which was folded down inside the lid and held in place with the wire frame. Stanford of Memphis recently suggested the use of skin from inside the shell of an egg. This would seem a difficult procedure.

The use of contact lenses suggested to us the possibility of using a glass curved plate. Under our direction the optician ground an ovoid shaped glass lens on a twenty dioptre base large enough to fit well on the eye and sufficiently large to keep the retrotarsal fold on stretch.

The following case report is interesting:

Case 1.—R. Z., a boy, aged fifteen, was agitating sulphuric acid in which he had placed a strong alkali. The ensuing explosion produced severe burns about the face and neck, second degree burns of the eyelids, cornea and bulbar conjunctiva of the left eye which presented a cooked appearance. The palpebral conjunctiva was involved into the fornix. The patient states that an attempt at neutralization was made with sodium bicarbonate solution used in both eyes five minutes after the accident. The right eye was only slightly injured.

The patient was hospitalized and the usual treatment of atropine, cold applications and fat beneath the lids, was instituted. On the following day there

was extensive swelling, edema of the lids and a profuse exudation of serous fluid. A canthotomy of the left eye was contemplated, but by evening of the second day the swelling had subsided sufficiently that it was thought unnecessary.

The glass symblepharon plate was pushed between the lids and left in place for a period of eight days. It was well tolerated by the patient after the first twelve hours. The edema of the lids rapidly subsided under ice compresses and general care. The conjunctival surfaces healed and the glass was removed. There were no adhesions.

The boy was dismissed from the hospital after a period of two weeks from the date of entrance and was seen daily at my office. At this date, June 20, 1932, a period of nine weeks, the eye shows a scar on the lower half of the cornea about 2 by 4 millimeters in area and there is a slight contraction of the lids, which does not interfere with function. There is a complete re-establishment of peri-corneal circulation. The vision is about 20-100, which will be materially improved with further treatment.

We report this case because, in our opinion, it is an unusual result from a very severe acid burn. To have saved the eye would have been an accomplishment, but to have useful vision and saved the patient the added torture of rebuilding lids, we think justifies the report and use of this appliance.

The appliance in this case was made of glass. Other materials could be used. It was ground slightly larger in area than the usual prosthesis with a large round opening made at a place for the cornea. We think this was poor judgment as it was impossible to fit the aperture over the cornea. Next time we shall omit this opening, cutting only several small holes for the admittance of medication.

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ENDOCRINOLOGY IN OBSTETRICS

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In spite of the facts amassed by biologists, anatomists and physiologists, during the last decade, placing endocrinology upon a firm basis, the profession in general has been slow to accept or apply these truths clinically. This skepticism, on the part of the physician, is not entirely without reason. Heretofore this field has been shadowed with a veil of unwarranted therapeutic and highly improbable theoretical claims, even bordering on quackery. As a result, the majority of the profession has religiously avoided this field and has made no effort to follow the interesting and exact experimental work which has been done.

It is especially important for the obstetrician to familiarize himself with the development of endocrinology, for the child-bearing state, over which he is the guardian, is the severest strain the endocrine system is called on to bear. Therapy is naturally divided into prophylactic and curative treatment. Prophylactic treatment is the ideal and fills every concept of preventive medicine. It is this role that the obstetrician will eventually play in endocrinology. There is abundant experimental proof that endocrinopathies are directly or indirectly transmitted from the parent to the offspring. There is also some experimental evidence that such transmission can be prevented if recognized and treated.

Dr. Oscar Riddle, at Cold Springs Harbor, New York, has succeeded in rearing three colonies of pigeons in which he can predict their separate levels of thyroid function before hatching. Dr. Phillip Smith, of Columbia, has succeeded in rearing a colony of rats which all show pituitary hypofunction in their successive generations. This pituitary failure is evidenced by uniform undergrowth.

Dr. Marine reports a convincing experiment with a female dog having goiter. This dog first had a litter of puppies all of which had goiter. She was then given treatment which was carried through her second pregnancy and in this litter there was a complete absence of goiter.

In the field of obstetrics two hormones have been evolved, but so far have not been evaluated clinically. The first is "theelin," or the female sex hormone, derived from the ovary. The second is the pituitary sex hormone derived from the anterior lobe of the hypophysis. Similar, or the same, hormones are elaborated in excess and excreted in the urine during pregnancy. It

must be evident that unless we, as clinicians, coöperate these works will be lost clinically.

At the present time the clinical application of endocrinology is in its infancy and recognizable symptomatology is not far advanced. To make a beginning, the following signs are set forth as possible evidence of lack of endocrine response in a human during pregnancy.

Careful inquiry into the family history will frequently disclose some type of endocrinopathy in the parent, more frequently in the mother. We believe that the common disorders so transmitted are the thyroidisms and the pituitarisms. In the thyroidisms, the history of struma, or thyroid over- or under-function may be obtained. In the pituitarisms the history will disclose usually an over- or under-growth.

During pregnancy the signs of thyroid failure are very often seen. They consist of mild myxedema, alabaster color, thickness, dryness and inelasticity of the skin, puffiness about the dorsum of the hands and fingers, fat pads in the supraclavicular and chin regions, unusual weight gain, sub-normal temperature, and slow pulse and diminished basal metabolic rate, below plus 10. Plus 15 is the normal rate after the first trimester. Such signs, if allowed to continue during pregnancy, without treatment usually result in a child very much overweight at birth, which during the course of its development will show the signs of thyroid under-function: complete athyrosis, congenital myxedema, or the milder forms of sub-thyroidism with their chain of mental and physical retardation. Treatment here is simple and consists of thyroid replacement sufficient to produce a normal metabolic rate with relief of the symptoms described. In the pituitarisms, in addition to

the over-growth or under-growth elicited in the family history, the following are looked upon as symptoms showing lack of pituitary response during gravidity: osteophytic changes about the joints, unusual chloasmas and pigmentations, tendency to blunting of the peak bones, coarseness of the facial features and an unusual gain in weight. Gain of less than 15 pounds or more than 25 pounds during pregnancy is considered abnormal. Dr. Zondek reports the discovery of a substance called "intermedin" which is derived from the middle lobe of the hypophysis. This, he believes, plays an important role in the control of skin pigmentation and especially during pregnancy because it is at this time these abnormal pigmentations are frequently initiated.

The treatment of pituitarisms during pregnancy is not as yet clear, but as the different hormones of this gland are found and standardized much can be expected.

It is well recognized that pregnancy is an important etiological factor in the development of thyrotoxicosis. The signs of thyroid hyperfunction are so generally known as to need little emphasis. Its recognition demands careful observance and wise judgment in so far as advice and treatment are concerned. A mild thyrotoxicosis can well be carried on with safety until term has been completed. The termination of pregnancy frequently results in a normal resumption of thyroid balance. One is justified under these circumstances in temporizing, as far as surgical treatment is concerned. If the signs of thyrotoxicosis become aggravated during pregnancy, or do not subside at the termination of pregnancy, surgical intervention may become advisable.

The final chapter of the so-called syndrome "Toxemia of Pregnancy" has not been written and it is hoped that investigation in this field may shed some light which will reduce its terrific mortality. Although many glandular products have been used by various clinicians with reported benefit, at this writing there is nothing definite to offer, clinically, in the toxemias. The hypothyroid states in pregnancy can, and do occasionally, simulate these conditions and treatment with thyroid extract is very apt to result in improvement.

Dystocia resulting from an abnormally large baby can very often be obviated. This has been done in our own experience and that of others. Given a history of preceding pregnancy with an abnormally large child, one may reduce the weight of the oncoming infant if thyroid extract is administered to tolerance, bearing in mind that its administration is only warranted under the most careful observance, including determinations of the basal metabolic rate.

The obstetrician should write the brightest chapter in this new and rapidly developing field. It is his duty now to recognize symptoms which show evident lack of endocrine response in the gravid state and apply proven therapy. More important, it is his duty to develop this new field by the interpretation and discovery of new symptoms, and the evaluation of new therapeutic agents. Then he will be in a position to institute definite and specific therapy which will preclude the birth of endocrinopathies, and in this way he will prove an able guardian for the health and well being of the two lives with which he is charged.

504 KRESGE BLDG.

A BATTLE IMPENDING BETWEEN THE MEDICAL PROFESSION AND PREDATORY INTERESTS

According to Dr. J. N. Baker, Officer of Public Health, State of Alabama, who recently addressed the members of the Massachusetts Medical Society at its Annual Dinner, there is a battle impending between the medical profession and the controlling interests of sociologists, economists, industrialists and insurance magnates who seem to have com-

bined in a merger for the control of medical service. He believes that in this test of strength, medical statesmen are needed as leaders and that they should be equipped with a wide experience and have access to information upon widely diversified subjects.

Public health officers must be in coöperation with the practitioners. Hence these two groups, organized medicine and public health, must not fail to realize that they will stand or fall together.—*New England Medical Journal*.

EPIDERMOPHYTOSIS OF THE HANDS AND FEET*

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I believe that it is no exaggeration to say that the one skin disease that is causing the medical profession as a whole more anxiety than any other, is the one to which has been given the generic term of dermatophytosis. This term attempts to cover that entire group of parasitic diseases of the hands, feet, and other parts of the body which have been known under the terms eczema cruris, trench feet, athlete's foot, ringworm of the hands and feet, et cetera.

Not only the profession, but the public, in its schools, colleges, athletic clubs, golf clubs, swimming pools, bathing beaches, and elsewhere, are all concerned in this medical problem. More magazine and newspaper space, both in its columns and in its advertising, has been given this disease than any other known skin disease, so that we may safely say that the world is now "ringworm conscious."

HISTORICAL DATA

We read in the medical literature about the "newer ringworm." We wonder just how "new" this condition is, so it may be interesting to present a brief history of the recognition of this condition.

As far back as 1857 Devergie gave a description of tinea cruris and stated at the time that the same eruption might occur on other parts of the body, including the extremities. Hebra, in 1860, published a description of this disease, and in 1864 Kolner demonstrated mycelia. In 1908 Whitfield described a series of six cases in which the most characteristic lesions were vesiculation and maceration between the toes; in some there was scaling on the palms and soles, and in one vesicles on the dorsal surface of the forefinger. He demonstrated a fungus in all of these cases. In 1910 Sabouraud published a résumé of the entire subject, demonstrating epidermophytosis in lesions from the foot in several cases and in one from the hand, and, in addition, cultured a number of these fungi. In 1911 both Whitfield and Sabouraud presented papers on this topic at the Royal Medical Society. This was followed by a group of reports, namely Montgomery and Culver in 1914, by Hartzel in 1915, and Ormsby and

Mitchell in 1916. In 1919 C. J. White classified all of the various groups as epidermophytosis and from then on the number of articles published became legion. Williams, in 1921, presented a study of eruptions on the hands and feet, going into a tremendous lot of detail, taking scrapings and cultures in every case.

In 1926, at a meeting of the American Dermatological Association, C. J. White, Fred D. Weidman, and Charles M. Williams discussed the various phases of Epidermophytosis and summarized all the known facts about the disease. By this time a large number of cases were reported with microscopic and cultural details all more or less corresponding to what has been aforementioned. In the Public Health Bulletin, September, 1928, Surgeon General H. Cummings of the U. S. Public Health Service stated that within the past few years, throughout the whole United States, many persons have been affected with an eruption of the hands and feet that is most marked during the hot weather; that in many people the disease is not only not a mild one, but disabling. He reviewed the parasitic causes and gave some differential diagnoses cautioning against the spread of infection through bath houses, gymnasiums, golf clubs, et cetera.

From 1927 to 1930 Williams' idea that the lesions on the hands in a great many instances were epidermophytids rather than epidermophytosis, became more current and, in July, 1930, Peck, in the Archives, published an extensive article proving by clinical, histologic, cultural, and experimental studies that this was a fact. Briefly, he established the presence of fungi in the lesions of the feet and the absence of them in lesions on the hands. He cultured the

*Read before the Section on Dermatology of the Michigan State Medical Society at its annual meeting in Pontiac, Michigan, September 23-24, 1931.

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fungi, reproduced the disease experimentally on the human being, and found the latter production of dermatophytid on the hands, coming to the conclusion "that the vesicular and squamous changes on the hands which accompany so many of the cases of epidermophytosis of the feet are epidermophytids secondary to the hematogenous transport of living fungi from the primary lesions of the feet."

INCIDENCE

Hazen states that the frequency of eczematoid ringworm in his practice is between nine and ten per cent of all new patients, while on the basis of other reports the percentage of cases is probably considerably higher. In studying a series of 161 consecutive cases in private practice, he finds that, apparently, the disease is most frequently acquired by treading where the unshod have trod. Many cases are acquired from the runways of swimming pools, from the floors of athletic clubs and from bath mats. Emphasizing the serious disability which is frequently produced by this disease, he found that with seventeen patients in his series there was a total disability for periods varying from two weeks to one year. Fourteen were disabled for from one to two weeks, and thirty-two showed a marked partial disability.

The toes of one hundred students were examined by S. H. Hulsey and F. M. Jordan, who found 67 per cent with clinically positive ringworm, 49 per cent were positive microscopically, while only 5 per cent were culturally positive.

Legge and others discussed the incidence of foot ringworm in relation to gymnasium hygiene. At the University of California they found that the incidence of ringworm of the feet among 3,100 freshmen entrants was 53.3 per cent in men and 15.3 per cent among women. At the terminal period of the Spring semester another survey was made of one thousand men and nine hundred ninety-seven women, who had been engaged for two semesters in physical education, and who had entree to the showers, swimming pools, and apparatus. It was now found that 78.6 per cent of the men and 17.3 per cent of the women had clinical manifestations of ringworm. The incidence increase among the women was only 2 per

cent, while among the men 25.3 per cent. They believed that this discrepancy was due to the fact that the women occupied a new gymnasium equipped with every known sanitary device, while the men occupied an inadequate gymnasium in which proper control measures were not used.

Shafer, examining 7,500 school children in Detroit, finds that the incidence increases rapidly with the age or school grade of the child. Three per cent of those in the first grade show involvement and this increases until those in the twelfth grade show 75 per cent involvement. It does not seem to be material whether there are swimming pools in these particular schools or not. The rate of increase seems to be about the same. In our own group of 1,000 cases taken from both clinic and private practice, we find the age of incidence as shown in Chart I.

CHART I. AGE OF INCIDENCE

1—24 months	4
2—10 years	34
10—20 years	196
20—30 years	282
30—40 years	271
40—50 years	173
50—60 years	34
60—70 years	6

Here we will note that the bulk of cases occur between the age of ten and forty years, or during the period of greatest activity of the individual.

One of the most interesting charts to study is the length of time that the patient has had the disease before consultation. Here it will be noted that two weeks, one to two months, and then one to two years form by far the largest number of cases. It is also interesting to note that fifty-one cases stated that they have had some disease of the feet for more than ten years.

CHART II. DURATION OF DISEASE BEFORE CONSULTATION

1 week	16	10 months	7
2 weeks	44	1 year	102
3 weeks	18	2 years	94
1 month	57	3 years	65
2 months	55	4 years	42
3 months	28	5 years	36
4 months	32	6 years	14
5 months	40	7 years	12
6 months	31	8 years	9
7 months	4	9 years	7
8 months	3	More than 10 years..	51
9 months	6		

CHART III. OCCUPATION IN RELATION TO
NUMBER OF CASES

Housework, or none.....	145
Student	264
Clerical work	216
Physicians, Nurses and Dentists.....	98
Salesmen	56
Teachers	26
Lawyers	47
Factory workers	67
Others	85

Chart III speaks for itself.

The relative increase in the number of cases presenting themselves for examination is quite remarkable, as is also the number of cases in which the patient comes in with a self-made diagnosis of "athlete's foot." Fully 30 per cent of all clinic cases coming into the dermatological department of the Grace Hospital present themselves for conditions of the hands and feet.

SYMPTOMATOLOGY AND DIFFERENTIAL
DIAGNOSIS

The symptomatology is, of necessity, varied because the part affected may be different, and because secondary infection and occupational dermatoses modify the appearance of the primary involvement.

With Williams, we like to classify the eruptions occurring on the feet in three main classes:

1. Those with the production of callus, with more or less scaling.
2. Those characterized by maceration of the skin between the toes, usually most marked in the third and fourth interspace and in the fold between the little toe and the sole, but may also occur between, or under, any of the toes. In the milder cases there may be merely superficial fissures, or a slight maceration at the very bottom of the fold. The eruption spreads gradually toward the free extremity, usually with tiny, deep vesicles at the advancing border. The eruption may extend along the dorsum, or along the sole, or there may be a considerable amount of swelling with eroded areas from which there is a good deal of exudate.
3. This type is characterized by the appearance of an eruption occurring on the sole, the side of the foot near the sole, and especially on the hollow of the instep. This eruption in its earliest stages consists of small, deep vesicles, sometimes occurring singly, but usually in irregular groups. The skin between the vesicles is, in the earliest

stages, normal. As the vesicles grow older, some are ruptured, discharging a small amount of serum, and then dry rapidly. Other vesicles dry without rupturing, leaving a small, characteristic brownish dot.

Chart IV shows the various types of lesions which are generally found. It will be noted that the vesicular, scaling, and macerating types are by far in the greater majority, whereas combined types of two or more types of lesions are quite frequent.

CHART IV. TYPE OF LESION

Vesicular	325	Papular	26
Scaling	360	Callous	58
Macerated	143	Keratotic	46
Fissured	62	Lichenified	21
Combined	289	Epidermophytides	55

THE SITES OF PREDILECTION

The macular and papular types seem to be found over any part of the body surface, the macular form often being found below the breasts, and here the lesions are peculiar in forming macerated, eroded, pustular, or secondary lesions. The areas between the buttocks, between the penis and scrotum, are also often involved. Between the toes, usually in the fourth interspace, we find "a white, clean, parboiled, usually smooth, sometimes wrinkled, condition." This pellicle-like skin can be easily removed, leaving a more or less inflammatory surface.

THE CALLUS TYPE

This type occurs more frequently than statistics would seem to indicate. The favorite site is the feet, and the callus develops usually over the transverse arch and on the heel. It is curiously translucent, the surface is smooth, and the outlines always sharp. Over the heel the growth may be uneven and either dirty white or canary yellow in color.

Chart V is a report from White's article, 1926, and shows that the toes, fingers, both thighs, palms, soles, and axillæ are the areas most involved in this disease.

Recent work seems to show that the bulk of the eruptions on the hands are not dermatophytic in themselves, but are dermatophytides. These lesions are often complicated by external irritants, or are disguised by treatment. The types usually found on the hands, which may definitely be classified as dermatophytic, usually provided the fungus is

found, are the eczematoid type characterized by vesiculation, maceration, and scaling. Also lesions which occur between the fingers, and in which the eruption consists of maceration of the skin. When this macerated epidermis is removed there is a bright red, shiny surface. This type has been described by Fabry, and later by Mitchell as *Erosio Interdigitalis Blastomycetica*.

CHART V. LOCATION OF LESIONS

White's Report			
Location	No. Cases	Location	No. Cases
Toes	341	Bends of Elbows.....	29
Fingers	279	Labia	24
Both Thighs	264	Nails	23
Palms	235	Penis	22
Soles	148	Flexors of Forearms	22
Axillæ	115	Right Thigh alone.....	16
Back of Hands.....	68	Heels	16
Perineum	62	Under Breasts.....	13
Intergluteal folds.....	61	Legs	12
Scrotum	59	Umbilicus	11
Instep	57	Neck	10
Backs of Feet.....	48	Popliteal spaces.....	9
Left Thigh alone.....	42	Arms	8
Balls of Feet.....	40	Trunk	4
Pubes	33	Scalp	2

This disorder usually appears on the web of the finger, and between the ring and middle fingers of one, or both, hands. It is commonly seen in women who have their hands in water in the course of housework. The irritative factors in water seem to be active in continuing the infection. Cultures from cases of this type showed the presence of yeast types of organisms.

The toe nails are often involved in parasitic infection, and various authorities have called attention to the importance of nails as a source of reinfection in epidermophytosis of the feet. The nails may be pitted, discolored, with longitudinal striæ, or there may not be a great difference from the normal in their appearance.

Probably one of the most interesting variations is the appearance of various types of lesions of the scaly variety on the smooth body surfaces, and of a vesicular variety on the hands and between the fingers. From these types no fungi have been recovered and Peck and Sultzberger, in recent work, have demonstrated that these lesions are not those of dermatophytosis, but dermatophytids. One of these men has cultured the blood stream, grown the organism, reinjected the organism into the blood stream, and reproduced the type of lesion. A pecu-

liarity of this condition is that it often appears on vigorous treatment of the primary ringworm lesion.

An interesting observation was made by Yeager. He selected 140 persons with healthy skins and seventy-seven patients with eczema of different types. He subjected the sound parts of their skin to various irritants for a period of twenty-four hours. Only 4 per cent of the skins of normal people showed a reaction to these chemicals. On the other hand, of the eczematous sufferers, 51 per cent developed on the sound parts of their skin a severe vesicular eczema. He commented on the fact of tissue idiosyncrasy. It is more than possible to believe that there exists among individuals a susceptibility, or an idiosyncrasy to the dermatophytic infections. This would account for the comparative freedom of certain individuals from infection, and the violence of attacks in predisposed individuals.

Among the etiological factors to be considered are tight woolen bathing suits, leather, such as base balls, gloves, handles of golf clubs, trusses, and shoes worn without stockings, suspensory bandages, and silk stockings. Also, and more important, are the floors of shower baths, swimming pools, gymnasia, and walks of bathing beaches. All of these, apparently, play a part in the spread of this infection.

It would be impossible, in a paper of this type, to give the complete differential diagnosis of dermatophytosis, but such conditions as eczema, syphilis, psoriasis, and lichen planus have to be considered. The vesicle of poison ivy may have a superficial resemblance and, in many persons who handle primrose plants, we frequently see an eruption upon the fingers, and, more rarely, the hands, wrists, and feet.

The rapidly increasing group of occupational dermatoses will have to definitely be taken into consideration when we consider Lane's report on industrial dermatitis, showing that approximately six per cent of the cases of eczema seen were due to industrial causes. We oftentimes wonder whether a number of these cases might not possibly be either dermatophytosis, or dermatophytids complicated by local irritation and pyogenic infection.

DIAGNOSTIC AIDS

Inasmuch as a great variety of micro-organisms are concerned in dermatophytosis,

it may be well to know some of the non-clinical aids in making a diagnosis. The fungus is found in the skin and in the scales, and scrapings may be collected for microscopic examination, of material preferably chosen from the margin of the patch involved. On these scales a few drops of twenty to forty per cent sodium hydroxide solution are placed. A period of time is allowed to elapse for digestion of the scales, and the preparation is then ready for examination under the microscope. The only difficulty which arises is that the fungus is not always found, even in definite cases of ringworm. In other cases imperfect microscopic technic renders the recognition of the parasite impossible. Inoculation of culture tubes containing Sabouraud's media will, in a number of cases, give positive cultures. In the scrapings, the types most usually found are the long, branching forms, and a type called the mosaic fungus, about which there is a question as to pathogenicity, and budding yeast cells.

Recently another method of diagnosis has been evolved. This consists of the intradermal injection of trichophyton, a "ringworm extract." This procedure is performed by diluting trichophytin, using dilutions of from 1-50 to 1-5. The diluent consists of sterile distilled water to which five drops of carbolic acid is added to every one hundred cubic centimeters. The injection is made intradermally, using moderate pressure and producing a white wheal. Injections start at dilutions of one to fifty, then one to thirty, one to ten, and one to five. Positive reaction is denoted by the presence of a well-defined, slightly raised area of redness, varying in size from three-quarters to one and one-quarter inches, and appearing within twenty-four hours.

MYCOLOGY

The two groups of infections which seem to be at the bottom of most of the parasitic infections reported are the trichophyton group, of which Chart VI gives a list of the main varieties, and the group of the yeast infections, and Beeson and Church have classified the groups found as follows:

- 1. Saccharomyces, with budding forms in culture, mycelium absent or present only in traces, asci present.
- 2. Cryptococcus, with findings similar to saccharomyces, but lacking asci.

- 3. Endomyces, with budding forms, mycelium well developed, septate or not, branched or not, asci present.
- 4. Monilia, with the same findings as endomyces, except for the absence of asci.
- 5. Odium with budding forms present, mycelium well developed, oval or rectangular, arthrospores present.

The mycology is, apparently, so involved that to one who is not a mycologist it would be hard to follow the difference in type.

CHART VI. SUMMARY OF AMERICAN SPECIES

	Cases
Trichophyton interdigitale	140
Epidermophyton cruris	54
Unidentified	20
Trichophyton rubrum	17
Trichophyton gypseum	17
Oidium albicans	8
Trichophyton asteroides	3
Trichophyton pedis	3
Trichophyton acuminatus	2
Trichophyton granulorum	2
Trichophyton laticolor	2
Trichophyton plicatile	1
Trichophyton amethysticum	1
Trichophyton violaceum	1
Sporotrichum schenckii	1
Total	272

PROPHYLAXIS

It is of the utmost importance that a decided effort be made to confine the disease to the person infected, and to prevent the spread of the parasite to other members of the patient's family and those with whom he might come in contact. The infected areas should be kept covered with garments that are easily sterilized. Cotton socks should be worn on the feet, and cotton underclothes should be worn on the body. These should be changed daily and the clothing boiled. Silk, wool, and leather should not be worn. The patient should never stand on a shower bath floor without foot covering, nor should he stand upon the floor of the bathroom without some foot covering that can be easily destroyed, or sterilized. Bath mats should not be used in the bathroom. Paper or newspapers can be used and these later can be burned. Patient should have his own towels and soap. The floors of the bathroom should be washed frequently with an antiseptic solution. The problem of disinfection or sterilizing the floors of gymnasias, bathing pools, and shower baths in clubs is one of great

moment and one which has not yet been solved. Perhaps the discussion will bring out some plans for the accomplishment of this object. Inasmuch as reinfection plays an important part in those cases which have been considered as cured, I greatly fear that this problem will have to be properly answered before the number of cases of this disease are diminished.

TREATMENT

The treatment more or less depends upon the type of epidermophytosis present and upon the local effect of the disease on the hands or feet. It is evident on the face of it that it would be a physical impossibility to use a strong Whitfield ointment on an acutely inflamed area, yet this is being done regularly, with disastrous results to the patient's physical condition and to his morale. It is my opinion that every acute inflammatory stage of this disease should be treated by lotions, either aluminum acetate solution 1-10, or potassium permanganate 1-1000 to 1-5000 solution. If there is a great deal of disability patient should be put to bed while the wet dressings are being constantly applied. Following the wet dressing an ointment such as the following may be applied:

Rx Acid salicylic	gr. 15
Resorcin	gr. 15
Tar ointment USP.....	dr. 1
ZnO	dr. 1
Ung. Aq. rosae qs ad.....	oz. 1

This has a healing, as well as soothing quality and, in our hands, has rendered yeoman service. If you like, the case may then be finished up with a Whitfield ointment, using a Whitfield ointment at night following a potassium permanganate foot bath. In the morning the Whitfield is wiped off and the feet, the socks, and the shoes powdered with an antiseptic powder containing either salicylic acid 3 per cent, boric 10 per cent, or such a powder as bismuth formic iodide.

Where we are confronted with the vesicular type, the vesicles should be opened aseptically and the lesions painted with 1-200 tincture of metaphen. Calluses and keratotic lesions should be soaked in a 20 per cent potassium hydroxide for ten minutes, then scraped with a sharp knife, after which Whitfield ointment may be applied. Castellani's solution, the formula for which

is hereby appended has rendered us good service in a large number of cases. X-ray therapy, using small fractional doses of X-ray weekly, has been a great aid in clearing up some of the more stubborn cases. Where epidermophytides are present, the X-ray is invaluable. Here, the X-ray is also used in fractional doses.

CASTELLANI'S SOLUTION

Rx Saturated alcoholic sol. of basic fuchsin..	10 c.c.
5 per cent carbolic sol.....	100 c.c.
Filter and add	
Boric acid	1 gm.
After two hours add	
Acetone	5 c.c.
Two hours later	
Resorcinol	10 gms.
The paint should be kept in a dark colored bottle with a glass stopper.	

Various investigators found that, when using trichophytin as a diagnostic aid, there was improvement in the parasitic condition and Van Dyke et al. report, in May, 1931, a group of 100 cases in which epidermophytosis was treated by means of intradermal injections of trichophytin. They report the following statistics:

	Per cent
Apparently cured	32
Greatly improved	28
Slightly improved	21
Unimproved	19

I believe that these statistics are sufficiently valuable and, inasmuch as they are borne out by other reports, that cases of epidermophytosis may be treated by intradermal injections of trichophytin, beginning with 1-50 dilutions and increasing to 1-5.

SUMMARY

1. Epidermophytosis is today, in all probability, the most common skin disease that we encounter.

2. It has been known since 1860, and has been particularly of interest since 1919.

3. A summary of the incidence, including the age, duration of disease, occupation, etc., is given.

4. The symptoms of this condition are varied because of the parts affected, and because of the frequency of secondary infection, and occupational dermatoses.

5. The etiological factors to be considered are the floors of shower baths, swimming pools, gymnasia, walks of bathing beaches, leather, silk, and wool garments,

and, above all, carelessness in observing the rules of hygiene.

6. The microscope, the culture tube, and injections of trichophytin are aids in diagnosing this disease.

7. Treatment of this disease is varied and presents considerable difficulty. A number of formulas for favorite methods of treatment are given.

CONCLUSIONS

The enormous increase in the number of cases of epidermophytosis seen in the United States has brought this disease to epidemic proportions, and it is costing the people enormous sums of money for its eradication.

In this paper we have tried to offer a bird's-eye view of the situation, which some

suggestions for a conservative method of treating this disease.

408 PROFESSIONAL BUILDING

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SYPHILITIC CIRRHOSIS OF THE LIVER*

WITH A CASE REPORT

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A review of the literature on late syphilis of the liver reveals that this condition is of very infrequent occurrence. LeDuc¹ reports the finding of only nineteen cases out of over 4,000 autopsies at the University of Michigan. He also found that syphilis was associated with atrophic cirrhosis in 60 per cent of the cases. However, Symmers² discovered only 28 per cent thus associated. Brunsting³ found only one case out of every 2,000 admissions at the Mayo Clinic. Joukovsky⁴ reported hepatic syphilis in an infant four months of age, which is very rare. The incidence of clinical syphilis is probably higher than is thought because it was demonstrated by Phillips⁵ to be present seven times more frequently in autopsy material than was found clinically.

Alcoholism is often elicited in the history. McCrae and Caven¹¹ think that alcohol may be a contributing factor but do not believe that syphilis is added to an alcoholic cirrhosis. Symmers² is also of the opinion that alcohol plays a secondary rôle in the etiology of even atrophic cirrhosis, and states further that there is a group of cases of atrophic cirrhosis as described by Laennec in which syphilis is the primary etiological factor and alcohol, if it enters into the process at all, is a contributory and not an essential factor. Owen⁶ also states that the frequent association of syphilis with Laennec's

cirrhosis indicates it to be an etiological factor. Friedenwald and Morrison⁷ believe that alcohol, malarial infections, and previous jaundice are predisposing factors. Owen⁶ further believes that chronic infectious processes, such as chronic arthritis and endocarditis, have been found associated with syphilitic cirrhosis a sufficient number of times to warrant further study. McNeil⁸ is of the opinion that in some instances syphilitic cirrhosis is a result of early acute or subacute hepatitis.

Late syphilis of the liver occurs as a diffuse cirrhosis or as a gummatous affection. The cirrhosis may be biliary, in which case jaundice results, or it may be portal, which will result in ascites. Gummata may be milary and diffuse throughout the liver or there may be a single gumma present or

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large nodular gummata. Diagnosis is often more difficult when miliary gummata are present because of likelihood of confusing the condition with, perhaps, malignancy, and if ascites is present, with portal cirrhosis of Laennec's type. O'Leary⁹ is of the opinion



Fig. 1. Photograph of patient before first tapping.

that no one condition exists alone, but that there is usually a combination of a diffuse hepatitis, some cirrhosis and also some gummatus involvement. Rolleston¹⁰ states that gummata and ordinary portal cirrhosis seldom coexist.

CASE REPORT

Mrs. T. G., J-1765, aged forty-eight, married, American, entered the Clinic, October 18, 1931. Chief complaint was swelling of the abdomen for past two years, and loss of flesh in face and arms for past year and a half. Patient states that up until five years ago she was in good health. At this time, there was noticed some pain in the upper right quadrant which was not severe and did not radiate to the back. There was no other complaint at this time but had the condition investigated in a Detroit hospital, where she was advised to have her gall-bladder removed. This was refused and she took up Christian Science, following which, she claimed, all her discomfort disappeared. On this account it was difficult to elicit signs and symptoms that might have developed. Her husband sent her to us. She told us, however, that she first noticed a swelling in the abdomen two years ago. Also, that there have been a few remissions in this, but lately the abdomen has progressively become larger. There has been no pain. Soon after, the legs began to swell and

at present, fluid seeps through the skin of the feet and ankles. The swelling involves all the tissues up to the upper extremities. There has been some nausea and patient cannot eat or drink much at a time. There is infrequent urination of small amounts. Patient has noticed a marked loss of flesh in her face and arms. She gives a history of drinking alcoholic beverages up until two years ago. She has no respiratory difficulty but says she has a little trouble getting about. At the present time menses are becoming irregular and scanty.

Family history discloses that her mother died of dropsy and a stroke. One sister has tuberculosis but there has been no contact.

Past history disclosed one pregnancy which resulted in miscarriage at five months. She was advised to have tonsils removed five years ago. Otherwise past history was essentially negative.

Physical examination revealed a middle aged female, quite emaciated about face and upper extremities but showing a mammoth distention of the abdomen with large dilated surface veins and extensive edema of two-thirds of body and lower extremities. Temperature was normal. Pulse 80, blood pressure 120/90. Height 5 feet, 6 inches. Weight 260 pounds. Pupils were found to be equal and reacted to light and accommodation. Tonsils were large and very cryptic. Thyroid was not enlarged but the eyes were somewhat prominent, due probably to the loss of flesh. No glandular enlargement that could be revealed at this time. The lungs showed the diaphragm to be high and the air capacity encroached upon. There were no râles heard, however. Cardiac dullness was hard to elicit, but there was a blowing systolic murmur heard at the apex but was not transmitted. The abdomen could not be palpated because of the hugeness of it. Surface veins were greatly engorged. The lower extremities presented an angry red, partially macerated skin about the ankles and lower legs because of the continuous seepage of fluid through the skin. Edema extended up to the upper extremities and neck. The reflexes were all present and equal.

Laboratory data disclosed a urine with 1 plus albumin and 20 white blood cells per high power field. Blood hemoglobin (Sahli) was 70 per cent and red blood count 4,200,000. Wassermann and Kahn tests were both strongly positive (4 plus). Non-protein nitrogen was 30 mgs. per 100 c.c., icterus index was 7. Spinal fluid was negative throughout. Guinea pig inoculation was negative. Ascitic fluid had the properties of a transudate. A gastro-intestinal series revealed no pathology but did show a narrowed, distorted, and defective duodenum due to external pressure. The chest plate showed the diaphragm, heart and lungs to be pushed upward. Only a small amount of lung field was visible.

An interesting statement made by the patient was that after the first paracentesis she was able for the first time to see over her abdomen while lying down. The patient was tapped five times, removing 8, 16, 8, 8 and 3.5 quarts successively over a period of two and a half weeks, or a total of 44 quarts. The liver was found to be two fingerbreadths below the costal margin. No nodules were palpated. The spleen was not felt. Patient was placed on ammonium chloride and salyrgan, but the fluid continued to develop. However, after iodides and mercury were started, improvement was noted almost immediately. The patient's weight was 130 pounds after the final paracentesis. Four and one-half months later, patient is in extremely good health and has gained 30 pounds in flesh. The liver is smaller but still just palpable below the right costal margin. The Wassermann and Kahn reactions have

been continuously strongly positive, although on one occasion both were negative. This latter finding is often found in the treatment of syphilis.

The diagnosis of syphilis of the liver is made by exclusion and on collateral evidence as may be obtained by the history, Wassermann reaction, laboratory findings, results of anti-luetic treatment, and a long period of observation. Gummata of the liver is perhaps the only condition which may be diagnosed by clinical findings alone. Difficulties in diagnosis are readily seen. McCrae and Caven¹¹ report a case which had been in a tuberculosis sanatorium for two years, and another which had been operated upon for acute cholecystitis. One case observed by Hunter¹² was given quinine for a suspected malaria, but when the patient obtained no relief, aspiration of the liver was attempted for a suspected hepatic abscess. It was not until the Wassermann proved to be positive that anti-luetic treatment was started. Three days later, the fever dropped to normal. The same author had another case which was scheduled for an exploratory operation, but when the blood was found to be positive, anti-luetic treatment was started instead and improvement was immediate. Turner¹³ reports having removed from the liver a large tumor size mass in a case with a negative Wassermann but which proved to be a gumma. Korns¹⁴ described a case simulating Banti's syndrome in the terminal stages. McCrae and Caven¹⁵ relate other cases diagnosed splenic anemia because of the large size of the spleen, tuberculous peritonitis because it was thought that the nodular liver was a thickened omentum, malignancy, portal cirrhosis, Hodgkin's and amyloid disease. Two of their cases had such severe cardiac conditions that the enlarged liver was ascribed to that. Cunston¹⁶ believes that many cases would probably be diagnosed Laennec's cirrhosis had it not been for the favorable response to anti-luetic treatment.

According to Rolleston and McNee,¹⁰ the age incidence is between twenty-five and fifty years. Ten to twenty years is the usual time interval between the primary infection and the appearance of late hepatic syphilis, although cases have been found as early as one year after infection. Friedenwald and Morrison⁷ place the incidence between three and one-half to twenty years; and also add that males are more suscepti-

ble. They obtained a positive history in 40 per cent of their cases.

The most common complaint is swelling of the abdomen. This may be from ascites or enlargement of the liver. The latter may be from a generalized cirrhosis or as a result of a large, localized gumma.

Rolleston¹⁰ believes that syphilitic lesions are more marked in the right lobe than in the left but that the left may be the larger because of a gumma or by a hypertrophy compensating for a destruction in the right lobe. McCrae,¹¹ on the other hand, states that the left lobe of the liver is most frequently involved, being either smooth, nodular, or containing one mass alone or associated with smaller ones. Friedenwald⁷ also thinks that the left lobe is more frequently the seat of the large nodular type of gummata. Mullally¹⁷ believes that the atrophy or hypertrophy of the right and left lobes might be explained by a thrombosis of the superior mesenteric which will produce an atrophy of the left lobe. O'Leary et al.¹⁸ state that a large liver and a slightly enlarged spleen suggest an early cirrhosis, whereas a small liver and a large spleen is late and of long standing. He also says that the degree and extent of the hepatitis controls the rapidity of the development of cirrhosis.

Often, there can be elicited a history of previous tappings with intervening periods of good health. Ascites frequently is early in both hepatitis and cirrhosis. Associated with the abdominal distention are large and engorged surface veins. Abrahamson¹⁹ describes a case in which a gumma of the liver produced pressure on the inferior vena cava causing the formation of a thrombosis with a resultant caput medusæ. McCrae¹¹ reports a case in which 19 and 22 liters were removed on two occasions within six months. He found that lymphocytes usually predominate. Of seven Wassermann tests carried out on ascitic fluid, four were positive and three were negative. A striking observation is the rapidity with which this fluid is absorbed on antiluetic treatment.

The next most frequent complaint is pain. This may be very severe, and, as we have seen, may easily simulate gall-bladder colic, even radiating to the back. However, O'Leary⁹ states that gallstones are frequently associated and so account for the pain.

Friedenwald⁷ believes that distention of the capsule produces the pain.

Another common finding is fever, which often misleads one, and has caused tuberculosis, malaria, liver abscess, etc., to be diagnosed. In one of McCrae's cases fever had existed for eighteen months. It dropped to normal in a few days after anti-luetic treatment was instituted. Friedman²⁰ recites a case where the temperature went as high as 106, but it came down to normal in four days after starting specific treatment. Klernferer is of the opinion that the fever is due to the ulceration of gummata, while Huber²¹ believes it to be due to an associated low grade peritonitis. As a rule the fever is not high.

Wile²¹ feels that the enlargement of the spleen is one of the earliest and most important common findings. He believes it to be due to chronic passive congestion or associated with amyloid changes. Mullally¹⁷ finds splenic enlargement greater in biliary than in portal cirrhosis. O'Leary⁹ states that splenic enlargement is a sign of cirrhosis. In McCrae's series,¹¹ 50 per cent showed an enlarged spleen. In one case, a gumma was found.

Hematemesis or melena is a very bad prognostic finding, and usually results from esophageal varices. Synge²² reports a case in which hematemesis caused the hemoglobin to be lowered to 20 per cent and the red blood cells to 1,700,000 and later death. Other findings frequently encountered are: various degrees of jaundice, loss of weight, emaciation, which may be a striking feature, dyspnea, vomiting, and various amounts of edema.

Blood findings are not specific. There may be various degrees of secondary anemia, usually mild. Occasionally there is a moderate leukocytosis. Rolleston states that leukocytosis suggests hepatic abscess rather than syphilis.

According to Phillips,⁵ 90 per cent will show a positive Wassermann. Davis²³ described a case which showed a negative Wassermann reaction of blood and fluid, an enlarged liver and spleen, jaundice, fever, and a response to specific treatment. McCrae¹⁵ also states that a negative Wassermann, in view of clinical data, should be ruled out. He further adds that a therapeutic test is important in obscure cases and is without danger. The Wassermann test is

more often negative in hepatic syphilis than in any other visceral syphilis. Gunston¹⁶ also states that a favorable response to anti-luetic treatment is sufficient to diagnose a case in spite of a negative Wassermann in the blood and fluid. Rolleston¹⁰ even goes so far as to say that failure to respond to specific treatment is not diagnostic and may be due to cicatrices, thus preventing any favorable effect upon the cirrhosis.

The consensus of opinion as to treatment is quite uniform. The use of mercury and iodides is considered the best form of treatment. In conjunction with these, O'Leary⁹ points out that the diet should be high in carbohydrates, that no drugs injurious to the liver should be given, and that the diuretics have replaced paracenteses except in the terminal stages. Even the above drugs should be used cautiously. Wile²⁴ believes that treatment should not be intensive because of the danger of producing a scar, which is the tendency both of the disease and of the treatment. He also adds that arsenic may be given after the patient has responded favorably to mercury and the iodides. O'Leary²⁵ finds that gummata not associated with a diffuse hepatitis is the only form in which arsphenamine is tolerated satisfactorily. Brunsting³ observed that mercury by mouth is the best way, and if improvement is noted it can then be given by muscle or by inunctions. Braun (Baltimore) is of this same opinion and adds that arsenic is very dangerous. Specific treatment will influence the syphilitic process but not its results. It is a common clinical finding that the Wassermann reaction is very prone to remain positive and that intensive treatment carried out to make it negative is very injurious to the liver.

The prognosis is generally very good. Patients usually die from some other cause than syphilis of the liver. Life expectancy is found to be best in those cases showing only gummatous involvement, next hepatitis and lastly the group with cirrhosis. The hypertrophic livers respond much better than the atrophic type. Wile believes that the prognosis is no worse than non-syphilitic interstitial hepatitis and he often finds that as the syphilis becomes better the symptoms are worse, because of the further contraction of the liver. However, he finds that early cases respond better. O'Leary has found that those cases which show a good

liver function by those tests most generally used (bromsulphalein, etc.) respond better to treatment and offer a much better prognosis. He also discovered that in those cases showing poor liver function treatment increased this dysfunction.

SUMMARY

1. Résumé of the literature is given with a complete bibliography.

2. A typical and unusual case is reported.

2201 E. JEFFERSON AVE.

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PROLAPSE OF RECTUM

Edward G. Martin, Detroit (*Journal A. M. A.*, July 30, 1932), presents the following classification of prolapse of the rectum which was determined by the extent or degree of the prolapse and the sequence of its development: First degree: internal or "concealed" prolapse; invagination of (sigmoid) pelvic colon into rectum; ptoses of pelvic colon. Second degree: rectum is protruded through anus. (A perianal sulcus is present; the anus is not involved.) Third degree: prolapsed colon, rectum and anus (no perianal sulcus present). Complete ano-rectal prolapse. Procidentia. Partial or mucous prolapse. (Commonly seen in childhood.) In the operative treatment the pelvic colon is pulled up until the rectum is taut and is fixed there; this cures the prolapse. Occasionally some supplemental repair may be desirable. The author describes the technic of colon fixation thus: A left rectus incision extending from the tubes to the umbilicus is made with a high Trendelenburg position. Assisted by a self-retaining retractor, the small bowel is packed off, exposing the colon, which is pulled up taut and quickly tied in position to determine the exact and relative location of the proposed fixation. The general location of the left ureter, mesial to the psoas major, should be borne in mind. The psoas minor, which is a tensor of the iliacus fascia and

has some mobility, makes an excellent location for the fixation, the tendinous portion being used. The iliacus fascia is more commonly used with no particular advantage other than it is always present and accessible. A 3 or 4 inch incision is made through the retroperitoneum and areolar tissue over the site chosen for fixation, the tendon or fascia being exposed. A number 1 chromicized gut suture is first placed through the longitudinal band of the colon, a little below a point where it is then to be inserted into the psoas minor or the fascia of the iliacus, and left untied. Four or five sutures are then placed about one-half inch apart in relative positions. When the first or lower suture is tied it pulls the colon up and in approximation to the exposed fascia; the other sutures are then tied successively. The lateral or outer edge of the peritoneum is sutured lightly over this fixation area to the colon, a fine needle with fine plain catgut being used, thereby covering all raw areas. It has been found unnecessary to suture the mesial edge of the peritoneum to the intestine, since it is in apposition to it after the fixation sutures are tied. It has also been found unnecessary to denude the colon at the area to be fixed. The usual abdominal closure completes the operation, and routine postoperative care is given with the patient in bed for at least ten days. A daily saline enema with evacuation in the recumbent posture is suggested for thirty days.

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NOVEMBER, 1932

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon

EDITORIAL

THE ANNUAL CONVENTION A SUCCESS

The 112th Annual Meeting at Kalamazoo was in the best sense of the term a success. It was well attended as shown by the registration of members, and nearly everyone voiced his approval. The Civic Auditorium made it possible to hold all sessions, sectional as well as general, under one roof. The forenoons were devoted to the various sections and the afternoons to a combination

general session, both surgical and medical. The outside speakers were for the most part men of national reputation. The extemporaneous address was a new feature which added to the success of the convention. We hope for the opportunity to print abstracts of a number of these addresses prepared by the speakers themselves.

Elsewhere in this number of the JOURNAL will be found a verbatim report of the deliberations of the House of Delegates. A verbatim report is in no sense selective, it leaves to the reader the task of placing emphasis on what appeals to him as most important.

MALPRACTICE

It is evident that the majority of physicians pay little attention to this subject until charges are brought against them. When a charge of malpractice is brought against a member of the Michigan State Medical Society the first step for the defendant to take is to communicate with Dr. W. J. Stapleton, Chairman of the Medical Defense Committee, who will take all the necessary steps for defense. This is particularly important if the member wishes the aid of the Michigan State Medical Society to which his membership entitles him.

A case of which some of the particulars have reached us makes timely certain warnings. The physician or surgeon should be very careful to obtain the consent of the patient or a relative or guardian next responsible, before performing any operation. Secondly, the utmost care should be taken even in what might be looked upon as minor procedures. There are doctors as witnesses who claim only one right way of doing anything. Experience teaches us that methods change from time to time. No person nor textbook can be accepted as authority inasmuch as most of our best textbooks have undergone many revisions, evidence that their authors did not consider them the final word. This fact alone should prevent us from dogmatic statements on the witness stand.

It would be more satisfactory if malpractice were not left to juries to decide. The writer has every faith in juries in selected cases. The jury as an institution came into existence as a provision of the Magna

Charta in the reign of King John. As we have it at present it is distinctly a British institution. It operates best where the population is homogeneous, among whom there is an *esprit de corps* for abstract justice. The English people, however, and the Canadians as well, recognize its limitations. In trials involving technical details the judge is the arbiter. Malpractice suits involve many details that are entirely beyond the comprehension of the average layman. Questions of law and those involving the evaluation of expert opinion would be better left to judges.

UNFAIR COMPETITION

At a recent meeting of physicians assembled from different parts of the state, a speaker referred to a practice of certain private hospitals offering to make laboratory examinations for a fee so low that it made it almost impossible for private physicians in that city to eke out a living in competition with the hospital. The hospital it was said used the inducement as a "feeder," hoping to make up in the hospitalizing of the patient. When the institution went into the "red" the deficit was made up by private subscription, or appeal to the community chest, a means that is denied the private practitioner. We do not know to what extent this practice prevails in this state. Many hospitals insist on a standard fee for X-ray and clinical laboratory work and do not cut fees, while physicians in private practice from necessity are often prevailed upon to do so. Hospitals are for the most part governed by laymen on the trustee boards and occasionally laymen are prone to look to what they consider the hospital's interest as an institution rather than the interest of the physician. The hospital is granted certain advantages, among them endowed rooms and tax exemption, which the staff and the private physician in practice are not granted. Without the free contribution in service of physicians, the hospital would be seriously handicapped in its dispensation of charity. Hospitals therefore would do well to safeguard the interests of members of the medical profession whether they are on the staff or not. The matter of avoiding competition with the medical profession was never so necessary as at present. Even in normal times the medical profession do enough charity work to entitle them to tax exemp-

tion, which is not theirs. At present many are not only contributing services but materials which constitute a considerable cash outlay. When a private hospital, or even a municipal hospital, engages in any form of medical or surgical practice for which it collects a fee not commensurate with the service rendered, it is in competition with the members of the medical profession to the latter's disadvantage.

THE PASSING OF A PIONEER

The death of Sir Ronald Ross on September 16 removes the last of the great pioneers of preventive medicine, several of whom have been sacrificed in the effort of elimination of mosquito-borne scourges, yellow fever and malaria. The name of Sir Ronald Ross will be always associated with the conquest of malaria. Sir Patrick Manson was the first to charge the mosquito with the disease, which up to his time was considered as caused by the night air of the marshes.

The facts of Sir Ronald's life are, briefly: born in India, May 13, 1857, studied medicine and graduated from St. Bartholomew's Hospital, London, 1881, immediately entered the Indian medical service. He began in 1895 a series of experiments to prove, or disprove, Sir Patrick Manson's theory that malaria was conveyed to man by mosquitoes. On August 20, 1897, which he called "mosquito day" he made his confirming experiments. He realized the importance of his discovery and what it meant to the world. That day he composed the following verses which are singularly apropos:

"This day relenting God
Hath placed within my hand
A wondrous thing; and God
Be praised. At His command,
Seeking His secret deeds
With tears and toiling breath,
I find thy cunning seeds
O million murdering death,
I know this little thing
A myriad men will save
O death where is thy sting,
Thy Victory, O Grave?"

The importance of the discovery cannot be overestimated. One writer* maintains that malaria alone has claimed more victims than all the wars of historical record. Sir Ronald Ross placed the number of victims at 2,000,000 a year. The disease has had

*F. H. Richardson, *International Clinics*, September, 1926.

its remedy in cinchona bark and later the alkaloid quinine. The greatest factor, however, in its elimination is the draining of swamps and thereby destroying the breeding places of the anopheles, which is said to have accomplished the downfall of mighty empires of the past.

DR. CRANE HONORED

Following a custom inaugurated by the University of Michigan three years ago, the choice of candidate for the honorary degree of Master of Arts was Dr. A. W. Crane of Kalamazoo. Everyone will agree the selection was the best that could have been made, one that will meet the approval of every member of the profession in this state whose good fortune it is to know Dr. Crane and his work. An alumnus of the University he has had a long and successful career and as a debtor to his profession he has honorably discharged the obligation. A pioneer roentgenologist, Dr. Crane has been highly instrumental in the development of the specialty. His written contributions have been marked with studied care. Gifted with a facility of speech that is rarely the lot even of those whose vocation is to speak from the public platform, he is always able to interest and to hold the attention of an audience. Even his extemporaneous discussions at medical meetings are masterpieces of well thought out exposition. Never does he indulge in platitudes. In a few well studied remarks he is able to elucidate a subject more or less abstruse or to add materially to the paper presented.

It is as a master of English prose that we wish particularly to commend Dr. Crane. He has a faculty, unfortunately too rare, of adding interest to any subject on which he assays to write. He possesses a scientific imagination and a mastery in the use of metaphor. His papers are characterized by simplicity and clearness as well as harmony in his choice of words, of which he has great verbal wealth. As a phrase artist he has few equals. To select almost at random from his writings we find such expressions (referring to that part of the anatomy immediately above the diaphragm), "costal grill," "thoracic cage," "the chest—that one cavity of the body ready-made for roentgen examination," and such expressions as, "spent the best years of his professional life on a medical frontier." He writes of roent-

genology, "The discovery was unexampled in dramatic surprise and promise," "The miracle of shadows by invisible light gave increasing power and precision to diagnosis," "It is the part of the pioneer to brave dangers and hardships. In this far region of the spectrum were lurking unknown dangers, unseen, insidious, deadly," "Pioneers in science, like pioneers in a new country, live often at isolating distances."

As a writer of English, Dr. Crane is in the same class as such writers as Allbutt, Osler, and a handful of savants of our own land who have been distinguished for their literary as well as their scientific contributions. His is a fine craftsmanship of the pen.

To the University as well as to Dr. Crane the Journal extends its congratulations.

GROUP INSURANCE

We have received a small folder on the subject of group medical insurance for employes which we have read through carefully. The argument for insurance to be used in the event of illness in one's family is logical, an argument which cannot be easily controverted. The idea of group medical insurance as expressed in this pamphlet is to provide a sum of money to take care of the employe's needs such as medical, surgical, hospital or laboratory fees in the case of illness.

If this idea leaves to the employe the free and untrammelled choice of a personal physician and leaves that physician equally free to seek any consultant or laboratory he may require in the way of X-ray or clinical laboratory for examination, we see no reason why the group insurance idea should not work to the advantage of all concerned.

If, however, the successful inauguration of group insurance is simply a prelude to the establishment of some sort of clinic owned and controlled by an insurance company issuing such insurance, it cannot be too strongly opposed by the medical profession in the interest of both patient and doctor. The exploitation of medicine will eventually (and at no distant date) lead to the deterioration of the medical profession. How would such a situation affect the patient? For after all it must not be lost sight of that the patient's well being is the objective of the science of medicine. The only end

obtained by the organization of a clinic to handle cases under an insurance plan would be economy to the company. Medical service would be placed on a "cut rate" basis; we do not associate "cut rate" with efficiency. How would it affect the doctor? He would be placed on a salary as low as competition would permit. He would be loaded up with clerical detail. He would have no encouragement to improve himself and even if he were disposed to take post-graduate courses or to supply himself with the latest medical literature in his specialty he would not be able to do so on his salary fixed by competition. So in the end patients would suffer from inefficiency in the doctor himself. Eventually medicine would become so unattractive that the best minds would refuse to enter it as is the case of one or two professional callings which might be mentioned at the present time. These clinic groups often owe their existence to the fact that a doctor wants to get a start, and later to go on his own as a private independent practitioner of medicine, but with the cream of medical practice, namely the great working class, taken over by the industrial clinic, he would find himself without the possibility of an independent practice. No man can afford to meet the demands in the way of present-day educational requirements for a medical license and allow himself on entering professional life to be exploited by any concern whose motives are in any degree commercial.

A LEAF FROM AN OLD ACCOUNT BOOK

We have been privileged to peruse an old ledger begun in 1752 by a physician of that time. The paper is tinted to a cream with the century and a half and more since it had been written but the writing though still legible is so faded as to render impossible an illustration *in facsimile*. Here, therefore, are the items as well as we can turn them into type. Some of the drugs mentioned are unintelligible to us, but enough remains clear that the principal therapeutic method of this pioneer physician consisted in elimination together with blood-letting. Written long before the American revolution, the English monetary system was still in use, as the writer computes his account in pounds, shillings and pence. Not until the year 1787 did the physicians begin to

compute their medical accounts in dollars. A perusal of this account shows that the patient, Mr. Christopherson Stiver, owed for a period of seven years. The last item on this account was incurred during the year of the Capture of Quebec and the death of General Wolfe. The exciting event of Dr. Hemmena's time was the Seven Years' War, which was really more important to us, at least in a political sense, than the World War of our own day. The greatest event in American history was the capture of Quebec.

Mr. Christopherson Stiver.
1752 To Doctor Hemmena:

			s
Feb. 1	To Purge	£0-	2
	To moderans	N1 0-	0-9
2	To Do	N1 0-	0-9
	To purge	0-	2
25	To Electus Laxet	3ii 0-	2-6
1753			
	To moderans	N1 0-	1
May 22	To Cordial Drops	51½ 0-	2
23	To Bleeding	0-	2
	To purge	0-	2
Dec. 14	To Cordial penet	3iv 0-	7
15	To Elcithy pecturals	3i 0-	2-6
16	To Foly Senna	0-	1
	To Cordial mixture	3vi 0-	6
1755			
	To Elcithy pecturals	3ii 0-	3-6
May 22	To a purge	0-	1
1759			
26	To Ditto	0-	2
July 25	To Cordial Drops	3ii 0-	4-6
27	To Do	3iii 0-	5-6
		£2-10-0	

ADVERTISING

As is well known, advertising is considered almost a misdemeanor of professional life, in medicine, in law, or in dentistry. The reason is apparent: one cannot advertise without extolling his own personal merits as a lawyer, doctor or dentist, which to say the least is wanting in modesty. The professional man of culture and ability shrinks from any such method of securing the attention of the public. Advertising in regard to cutting fees is in the same category, inasmuch as the advertiser is seeking an unfair advantage over those who do not do so.

The Ethics Committee of the Wayne County Medical Society (we presume with the sanction of the council of the Society) have gone on record as opposed to physicians listing their names in the telephone directory in bold face type, which would tend to give them an advantage over their fellows, to the patient searching for a physician's name.

If the *bona fide* achievements in medicine could be broadcasted to the laity without the intrusion of personalities we believe that much good might be accomplished. And here there is even a danger. It is so easy to overstep the bounds of truth, especially to a sensation-seeking public. The limits of scientific medicine should receive as much emphasis as its achievements.

If personal advertising were permitted by the ethics of the various professions there is no telling to what extravagance it would lead, and in the end the public would be fed up with misinformation.

WHEELUM VISITS DOCTOR LOCKE

Weel, Ah'm doffin' ma tam tae th' healin' shrines o' St. Ann's an' St. Joseph's, an' tae Dōctor Locke. A' three o' them hae mair crutches layin' aroon' aboot them than will start a halesale hoos in business.

A' three o' them are practicin' a medicine that's nae foon' in oor auld freen' Osler, bit a' three are attractin' their thoosands.

Ah think Dōctor Locke has th' easier jōb. He sits in a swivel chair wi' a cushion intil it, while Brither Andre has tae kneel wi' his knees, an' sometimes wi'oot ony cushion, an' that's nae sae easy on th' knees, bit, th' guid brither dosna min' that for he kens that sacrifice mak's us mair humble an' holy, an' St. Joseph, wha gi'es him th' poorer tae cure, is mair honored in sacrifice than in praise. Of course Dōctor Locke dosna min' workin' his chair roon' an' roon' for he pits intil his pooches aboot fourteen dollars every time his chair mak's ane clockwise turn. E'en in this he has a handicap, as his chair is nae up tae date, an' when it rins doon he must stand oop an' turn it counter clockwise till it screws oop as far as it will, an' repeat this exercise when it rins doon again.

St. Joseph's an' St. Ann's hae mair beauty an mair reverence in their magnificent shrines, an' an atmosphere mair in keepin' wi' Divine healin' while Dōctor Locke works under an apple tree in fine weather an' in a garage when there is a Scotch mist fallin'.

They are a' busy. They dinna hae ony expense. They need nae laboratories an' nae nurses. They pay nae rent, mak' nae diagnosis, keep nae records, write nae histories, tak' nae names, ask nae questions, ask nae aboot symptoms an' haenna ony time for conversation.

There were aboot five hunder people (actual coont) millin' aroon Dōctor Locke, Sunday, Sept. 18.32. They were there frae every state an' country, frae th' sun kissed vales o' California tae th' rock boond coast o' Newfoondland. Many were

poor, hopeless, helpless, heavy, crippled invalids, carried o' wheeled or crutched. Some were poor. Some were rich. Some were happy. Some were placid. Some had an abidin' faith that th' twist o' their feet wid mak' them weel.

Ah! How fine an' beautiful are th' cures. How sad an' heartsick are th' failures. Bit, a' an' a' we see a mighty courage, a michtier faith, a longing hope,—an' sometimes frae this bounteous hope springs a happy touch o' relief.

Noo, who is there tae sae nae tae those wha are doon in th' valley o' despond, crippled, heartsick, unweel, discouraged, weary an' faint, an' fagged oot wi' years o' despondency. Hae they a wee bit hope left, an' hae they faith in th' twist o' th' feet, then let them gang doon tae Dōctor Locke, bit if they hae mair faith in th' Shrines, weel, let them gang there an' in the' layin' on o' prayerfu' haunds, touch "th' hem o' th' garment" an' in simple sublime child-like faith, renew their courage, health an' hope.

Guid nicht,

WHEELUM.

DR. T. K. GRUBER—A PEN SKETCH

The following paragraphs appeared in the Detroit Free Press. Dr. Gruber is well known to many members of the medical profession of this state and particularly Wayne County, who know him as a genial, friendly and capable physician and hospital manager. During his long connection as Superintendent of the Receiving Hospital of Detroit he made a host of friends who will be interested in this little personal sketch.

"Dr. Thomas K. Gruber, superintendent of Eloise Hospital, fiddled around until he graduated from college and then got down to the serious things of life. He hasn't touched his violin since. Though he had made lots of money in his student days playing at dances and entertainments, he put the instrument in the attic of his parents' home and hasn't seen it since.

"He has always wanted to be a practicing physician, but fate always has made him a hospital executive. Eighteen months after he entered the Cleveland City Hospital as an interne he was made assistant superintendent. Even when he went in the Army and thought he was going to get away from it all, he ended up in charge of a hospital in France.

"An early-rising habit acquired as an Ohio farm boy has always stayed with him to the horror of his internes. A young doctor who isn't on the job by 7 A. M. gets little consideration from him. When he was superintendent of Receiving Hospital, several times each week he'd be in the internes' quarters at that hour pounding on doors to make sure that there were no laggards. He has carried the habit to Eloise. To show how early he used to get up, he recalls that the tip of one finger was taken off before 5 one morning when he was 9 years old by a surgically inclined corn cutter.

"There's always a big celebration on his birthday, since he was born 45 years ago in Navarre, O., on July 4. He graduated from Heidelberg College, Tiffin, O., in 1908, and the Western Reserve Medical School in 1912. He came to Harper Hospital as assistant superintendent in 1915, went to France with Base Hospital Unit 17 in 1917 and returned a major in 1919. He became superintendent of Receiving Hospital in 1922 and went to Eloise in 1929.

"He had enough fruit as a boy to last him for life. His favorite meal is made up of potatoes and bread and butter—providing the bread is at least two days old. It isn't a health complex; he just doesn't

like fresh bread. And he can't stand strawberries or muskmelon.

"He is a great believer in 'waiting out' for problems to solve themselves. 'Time is a great healer and leveler,' he says. Most of the great problems of his life solved themselves by being let alone. He thinks maybe this is why he knocks on wood. It gives another moment to consider things.

"He likes to fish but hasn't had time for it in the last two years. Hasn't had a vacation for three. If he ever gets enough money and time he's going to have a lot of fun for the rest of his life doing research work in cancer and mental diseases.

"He'd like to prove definitely that mental diseases—not feeble-mindedness—are of organic origin like a broken leg. He is certain they cannot be inherited any more than a broken leg can. When more work has been done along that line, he believes, many mental ills will respond to treatment like other diseases.

"His favorite recreation is playing poker. His one superstition, aside from knocking on wood, he says, is not betting on three of a kind. 'More money is lost in that way than in any other,' he claims."

SIR WALTER SCOTT AS A PATIENT

Thanks to his own pen and that of his faithful Lockhart, we have a fairly complete history of the illnesses of Sir Walter Scott, the centenary of whose death is reached this month. Scott was a man of powerful physique, with the chest and arms of Hercules but a wasted right leg, due to infantile paralysis, which accounted for his lifelong lameness. After an invalid childhood he enjoyed robust health until the last fifteen years of his life.

In 1817, at a dinner party he was giving in Edinburgh, he was seized with cramp in the abdomen, and retired from the room with a scream of agony which electrified his guests. The symptoms yielded to severe medical treatment, but he wrote a little later that he was "still as weak as water from the operations of the medical faculty, who, I think, treated me as a recusant to their authority, and having me once at an advantage were determined I should not have strength to rebel again in a hurry." To another correspondent he wrote that he had been plagued all the previous winter with these stomach pains, which he had tried to combat by drinking scalding water; as they grew unpleasantly frequent he had recourse to his friend Matthew Baillie, but before Baillie could do anything there occurred the dinner party incident. All sorts of remedies were applied, including heated salt, used in such a way that it burned his shirt to rags, though he hardly felt it when it was "clapped to his stomach." Profuse bleeding and blistering, "under higher assistance," saved his life. Dr. Salsbury MacNalty in "*The Great Unknown*" (Epsom: Birch and Whittington, 2s. 6d.) regards these attacks as almost certainly gallstone colic.

In succeeding years there were returns of this colic at intervals; opium seemed to be the only medicine to stay the pains, and this produced such depression that, as he half-humorously said, it became a "pull-devil pull-baker" contention, "the field of battle being my unfortunate præcordia." In more jest about his malady he compared what was taking place in the region of his diaphragm with the process whereby the "de'il" was said by Burns to make a "king's head" (meaning one of the stomachs of ruminating beasts) into a speuchan, or Highlander's tobacco pouch. Ultimately he got better, thanks to calomel, introduced to him by a Dr. Dick of the East India Company. "The origin of the complaint,

it seems," wrote Scott, "is some derangement in the gallbladder leading to the formation of obstructions in the biliary ducts, whence arise cramps, fits of sickness, spasms, jaundice, and all the evils that have undone me." Calomel, used in very small quantities, was, "Lord love its heart," an absolute specific. Ten days' rigid attention to Dr. Dick's directions restored him to action, to appetite, and to healthy digestion.

The first premonition of an illness against which calomel would be unavailing came in 1822, ten years before his death, when he spoke of "a whoreson thickness of blood and a depression of spirits . . . and Peveril will, I fear, smell apoplexy." Three years later he had violent pains in the right kidney and parts adjacent, which forced him instantly to go to bed and send for Clarkson, the Montrose surgeon, who pronounced it gravel augmented by bile. He was better next day, but uncomfortable from the effects of calomel, "which is like the assistance of an auxiliary army, just one degree more tolerable than the enemy it chases away." Hemorrhages developed in the summer of 1829, after weeks of headaches and nervous prostration, and copious cupping was done. Cupping, said Scott, was not painful, but it was rather like a giant twisting your flesh between his finger and thumb.

In February, 1830, came a paralytic seizure, after which he submitted to a severe alimentary regimen, tasting nothing but pulse and water for weeks. At the end of that year he experienced slight vertigo on going to bed, and on the advice of Dr. Abercrombie abandoned his daily cigar, and cut down by one-half his daily ration of a winglassful of spirits. In the following April he had a stroke of paralysis affecting both nerves and speech. His Continental journey, the onset of his fatal illness, his return to London, where he was attended by Sir Henry Hallford, and his final journey, a dying man, to his beloved Abbotsford, are too well known to need recounting.—*The British Medical Journal*, September, 1932.

Note: This extract was brought to our attention by Dr. Charles E. Dutchess of Parke, Davis and Company. Scott's remains, together with those of his noted son-in-law, Lockhart, lie in a tomb in Dryburgh Abbey, which is only a few miles from Abbotsford and from Melrose. Up the Valley of the Tweed within a mile or so of Dryburgh Abbey is a spot where Sir Walter Scott over a century ago used to rest while on horseback or in his carriage to survey the valley below. The scenery is most beautiful. It is said that so accustomed were the horses to stop at this spot that when the poet was conveyed to his last resting place the cortege stopped at this spot as the horses refused to go farther and had to be replaced by a second pair. Scott died on September 21, 1832. We would like to interject a suggestion that the centenary of his death be the occasion for the re-reading of his works. His healthy romanticism would serve as a corrective for the feverish unrest of the present day.—EDITOR.

PHYSICIANS WHO SEEK FULL TIME SALARIED POSITIONS

(Journal, American Medical Association)

The physicians who have considered seriously the acceptance of full-time salaried positions with corporations of business men who propose to exploit such service for profit may consider well what happens when economic stress, personal relationships, differences of opinion as to scientific methods, or similar complications necessitate separation of the

employed from the employer. The employer of the physician in private practice is his patient. In times of stress these patients may not be able to pay him as much as previously, perhaps not at all. During the present emergency most physicians are continuing to care for their patients and are waiting patiently for the period when a return of prosperity will permit the settling of debts. These physicians still have their practices. The physician employed by a corporation has no practice of his own. The patients are not his patients—they are the patients of the clinic, institute, group or other corporation that employed him. When he severs his connection with his employer, for any of the reasons that have been mentioned, he must remove most frequently to another community, there to begin as he might have begun years before, to develop the relationships with individual patients that have been the very basis of medical practice since the beginning of time. And what of the patient? In the clinic, institute or group lies the record of his medical care, but such a record is far removed from the human understanding that is fundamental between patient and physician. Michael Davis cites as one of the qualities which patients may rightly expect in medical service "a sense of personal responsibility for each patient on the part of the physician and a sense of individual attention from the physician on the part of each patient." Is there the slightest reason to believe that any corporation of business men vending medical service through salaried physicians will ever be able to meet this expectation?

GENERAL NEWS AND ANNOUNCEMENTS

The Council has selected the dates of Sept. 12-13-14 for the holding of the next annual meeting in Grand Rapids in 1933.

Many members would profit if they announced their specialty in the Professional Announcements department in the advertising section. The rate is reasonable.

Dr. D. S. Brachman of Detroit and Miss Miriam Levin were married on September 8. They have returned to Detroit after a honeymoon spent at Havana, Cuba.

Dr. George E. Brown, Chairman of Medical Education and Research, Mayo Clinic, addressed the Jackson County Medical Society, October 18, on the subject of "Problems of Hypertension."

It has been voted that the *Bulletin* of the American Society for the Control of Cancer be made its official organ and that the present relationship between the Society and the *American Journal of Cancer* be discontinued.

The Annual Conference of State Secretaries and Editors called each year by the A. M. A. Trustees will be held in Chicago, Palmer House, No. 18 and 19. This year State Presidents will be invited and consideration will be confined to proposals for community medical service.

The honorary degree of M.A. has been conferred upon Dr. A. W. Crane of Kalamazoo. Dr. Crane is the third physician for the honor. Dr. C. B. Burr and Dr. Charles G. Jennings of Detroit were so honored in 1930 and 1931 respectively.

The Michigan X-ray and Radium Society was organized at Detroit, September 28, 1932. Dr. A. W. Crane of Kalamazoo is the first President and Dr. Donaldson of Ann Arbor, the Secretary. The membership will consist of all those members of the medical profession of Michigan who are engaged exclusively in X-ray diagnosis and X-ray and radium therapy.

The annual meeting of state secretaries and editors of state journals will be held in Chicago, November 18 and 19, when subjects of vital interest to the medical profession will be discussed, among them the attitude of medicine towards the rapid development of contract practice in its various forms and the many artificial plans that are being promoted for providing medical and hospital service.

On October 4, Dr. H. Wellington Yates was formally introduced by Dr. H. W. Plaggemeyer, the retiring president, as president of the Wayne County Medical Society. Dr. A. W. Blain is president-elect and Dr. E. C. Baumgarten, secretary. The address of the evening was made by Mr. Malcolm Bingay, managing editor of the Detroit Free Press, the subject being the late Sir Ronald Ross. The address was listened to with marked attention and appreciated by a large audience of members of the Society.

Announcement has been made that the American College of Physicians will hold its Seventeenth Annual Clinical Session at Montreal, with headquarters at the Windsor Hotel, February 6-10, 1933. Dr. Francis M. Pottenger of Monrovia, Calif., as President of the College, has charge of the program of General Sessions. Dr. Jonathan C. Meakins, Professor of Medicine and Director of the Department, McGill University Faculty of Medicine, is General Chairman of local arrangements and in charge of the program of Clinics.

The seniors, those members of the Wayne County Medical Society with over twenty-five years of practice, very appropriately inaugurated their 1932-1933 season of programs Monday, October 10, with a testimonial luncheon in honor of Dr. Don M. Campbell. About sixty members were on hand in the Society's club rooms to pay tribute to their respected colleague, who has just returned to his work after many months' illness. The toastmaster was Dr. Angus McLean. Short talks were given by Drs. J. E. Clark, R. E. Loucks, William Fowler, George E. McKean, B. W. Pasternacki, and the honored guest.

The Highland Park Physicians Club annual clinic, Nov. 30th, will be held at the nurses' home adjoining the Highland Park Hospital. This will be as usual an all day clinic. There will be a pathological conference at 8 o'clock in the morning. The program includes doctors who will present subjects as follows: Drs. Carl Davis, Chicago, Carcinoma of the Large Bowel, demonstrated with lantern slides; William Mullen, Cleveland, The Relation of Sinus Infection to Diseases of the Chest; Henry Walman, Mayo Clinic, Rochester, Pain as a Diagnostic Symptom; Dr. Lashmet, Ann Arbor, Water Balance; Clifford G. Grulee, Chicago, The Newborn Infant, Care and Pathology; and Dr. Gellhorn of St. Louis (subject to be announced later). The membership of the Michigan State Medical Society are cordially invited to these clinics. There will be an evening program to which ladies are invited. The speaker of the evening will be Mr. James Schermerhorn.

OBITUARY

DR. CALVIN A. WISNER

Dr. Calvin A. Wisner of Columbiaville, Michigan, died on August 27, 1932, of apoplexy. He was born at Hartland in 1854 and was graduated from the Michigan College of Medicine and Surgery in Detroit in 1879. Following his graduation he served one year with Parke, Davis and Company, after which he entered private practice, first locating at Otisville, Michigan, where he practiced for two years. From here he moved to Columbiaville, where he was in active practice for fifty years. He is survived by his widow and one daughter, Mrs. Ray Spencer of Columbiaville. Dr. Wisner always showed an active interest in the affairs of his county society and his presence at the meeting of the Society will be greatly missed.

DR. WILLIAM APPELBE

Dr. William Appelbe of Detroit died on October 17, 1932, of Bright's disease, at the age of sixty-four years. He carried on his practice to within a month of his final illness though his health had been poor for several years. Dr. Appelbe represents a type of practitioner who, born in Ontario, spent his early adult life as a school teacher. Teaching school was a stepping stone to medicine and law in Canada forty years ago. And many physicians of the older generation are to be found in both the United States and Canada who entered medicine through the avenue of school teaching. Dr. Appelbe had a wide knowledge of English literature. He was always an interesting conversationalist. Following his graduation from Trinity Medical College, Toronto, in 1901, he moved to Detroit, where he had been in practice up to a few weeks ago. He had during his three decades or more of practice a large and influential following. His pharmaceutical education, which he acquired after a few years' teaching in Ontario, gave him an acquaintance with drugs that few doctors possess. His knowledge of materia medica, together with a diagnostic sense of a high order, resulted in an internist whose abilities were among the best. In 1903 he was married to Miss Gertrude Luke, who survives him. Dr. Appelbe was a member of the Wayne County Medical Society, Michigan State Medical Society and American Medical Association.

DR. WILLIAM E. UPJOHN

Dr. William E. Upjohn of Kalamazoo died on October 18 at the age of seventy-nine years. He was founder of the Upjohn Company of Kalamazoo and its president for nearly forty years. Dr. Upjohn was, among other things, noted for his contributions to civic, industrial, philanthropic, religious and cultural movements in Kalamazoo. He had earned the title of Kalamazoo's "first citizen." Dr. Upjohn was at one time mayor of Kalamazoo. The 112th annual convention of the Michigan State Medical Society was held, as is known, in the new Civic Auditorium at Kalamazoo, which was the gift of the late Dr. Upjohn. Among his other benefactions may be mentioned the Art House of the Kalamazoo Museum and Art Institute, the development of Upjohn Park as well as large contributions to the gateway and Milham Park Public Golf Course. He was the son of one of the early pioneer physicians of the county. Dr. Upjohn graduated from the University of Michigan School of Medicine and Surgery in the

class of 1895. He is survived by his widow, Mrs. Carrie Upjohn, two daughters, Mrs. Delano and Mrs. Gilmore, one brother, Dr. James T. Upjohn, and one sister, Mrs. Sidman, all of Kalamazoo. Resolutions of respect were adopted by the City Commission of Kalamazoo extolling the late Dr. Upjohn as the framer of the city commission-manager charter and the city's leading philanthropist. The funeral services were held in the First Congregational Church.

COMMUNICATION

INSURANCE BLANKS

September 26, 1932

Executive Secretary
Wayne County Medical Society
Detroit, Mich.

Dear Mr. Burns:

Your letter of September 21, addressed to Dr. Warnshuis, has been referred to me for answer.

At the present time, the question regarding the charging of a fee of \$2.00 for each insurance report for patients carrying health and accident insurance policies has been referred to the Bureau of Medical Economics of the American Medical Association, of which Dr. R. G. Leland is director. This was in conformity with the action taken in the House of Delegates of the American Medical Association at its meeting in Philadelphia. This Bureau has made a preliminary report, which has been published in the Journal of the American Medical Association, but until a final report is made, of course, no further action can be taken by the Michigan State Medical Society.

On page 596 of the Journal of the Michigan State Medical Society, September, 1932, issue, will be found the report of the Civic and Industrial Relations Committee. In paragraph 2 is the following statement:

"It is recommended that physicians adhere to the meaning of the resolutions by appending a statement for \$2.00 for services to each report blank filled out, whether it is requested by the claimant or the insurance company."

This should be interpreted to mean that each physician filling out a claim proof should attach a separate statement made out to the insurance company for \$2.00, and is in conformity with the original resolutions passed at the Jackson meeting in 1929 and the Benton Harbor meeting in 1930.

It is known that many insurance companies refuse to honor such statements at the present time and this is an unsatisfactory situation. However, the International Claim Association has appointed a special committee of insurance representatives, with Mr. Robert K. Metcalf, Manager of the Claim Department of the Connecticut General Life Insurance Company, as Chairman, and because this committee is coöperating with the Bureau of Medical Economics of the American Medical Association in an endeavor to agree to a mutually satisfactory understanding, it is deemed advisable by the Civic and Industrial Relations Committee of the State Society that all physicians use this method temporarily.

The Civic and Industrial Relations Committee will publish in the Journal any definite recommendations of the Bureau of Medical Economics just as soon as they may be forthcoming.

Sincerely,
HARRISON S. COLLISI, M.D.
Chairman, Civic and Industrial
Relations Committee.

Proceedings---112th Annual Meeting Michigan Medical Society, Kalamazoo,

September 13 to 15, 1932

GENERAL SESSION

Wednesday Evening Session

September 14, 1932

The First General Session of the 112th Annual Meeting of the Michigan State Medical Society, held in the Civic Auditorium, Kalamazoo, Michigan, Wednesday evening, September 14, 1932, was called to order at eight o'clock by Dr. Carl F. Moll, President of the Society.

President Moll: Ladies and Gentlemen: We will come to order and have the invocation by the Reverend Dunning.

Reverend John W. Dunning: Almighty God, Thou art the supreme architect and ruler of the universe. Thou hast made all things good. We rejoice that under Thee we live with the reign of law, that Thy great system is builded upon that on which we may depend.

We thank Thee for night and day, summer and winter, sunshine and shower. We rejoice in life. We thank Thee for the great nature so filled with blessing, with bounty, and with beauty for us all. We rejoice in our dominion over it and the privileges we have in living above it.

We thank Thee for the many ministries of those who have delved into the secrets of nature and unfolded the wonders of science, and all the gracious ministry that has been brought to us through hearts and hands that have labored together with Thee in the mastery of life.

We thank Thee for the physicians of the world, their discoveries, their healing touch, their patience, and all that they have done for humanity, and are still doing. We pray Thee that tonight all sick folks may be blessed, and the ministry of doctors and nurses be glorified with new healings.

We thank Thee, O our God, for the occasion that brings us together in this city, and pray Thee that there may be a new fulfillment of the promise of the Great Physician, that Thy people in their final ideal shall enter into a state where people universally are healthy and happy because they have learned the ways of living with Thee.

May Thy Kingdom come with the fullest richness upon the earth, and Thy will be done everywhere as it is in Thy realms on high. Amen.

President Moll: Next, I will introduce to you Dr. R. A. Morter, President of the Kalamazoo Academy of Medicine, who will welcome you to the city.

Dr. R. A. Morter: President Moll and Members of the 112th State Medical Meeting: In behalf of the Kalamazoo Academy of Medicine, I welcome you to this city and extend you greetings.

Since this organization had its first meeting some 112 years ago, we have had the honor of being your host on four previous occasions, the last being in 1920. This is a great honor to us, and I hope it will not be as long until you have returned to us.

I have heard a great many addresses of welcome. I mean I have had to sit and listen to them. They are always more or less boring because addresses of welcome usually deal with the dollars and cents which concern the city, or the beauties of its streets, public buildings, and so forth. But today as I welcome you here, I wish to call your attention to a different side of our city. I like to look at our city as an educational center, or more specifically a medical educational center.

We have in our city two colleges, the Kalamazoo College and the Western State Teachers' College, which give premedical courses. The students who are taking the premedical work here are constantly scrutinizing our medical profession of the city, many of whom they hold up as ideals.

As I look back at some of the members of our Academy of Medicine, I can think of many men who have contributed greatly to this city not only in a humane way, alleviating the ills and sufferings of persons, but also in the way of contributing something to the ideals and civic pride of a community.

I think specifically of Dr. VanDuzen, a member of the Kalamazoo Academy of Medicine many years ago, who was a great believer in education and who left to this city a beautiful public library. In passing, I might state that our Academy of Medicine has had its home in this public library since it was built in 1893. Dr. VanDuzen in his will set aside a room in this public library where the Academy of Medicine hold their meetings at regular intervals.

I think of the physicians of the community who have donated to the city their services in the way of conducting free clinics and taking care of the poor and unfortunate. I think of the innumerable physicians in years gone by who have acted as consultants for our staff at the State Hospital and who have built that institution which now has about 2,800 patients up to a standard where it is accepted by the American Medical Association as a teaching institution. Our men are constantly donating this type of service to our community, trying to build up the standards of the medical profession and trying to tell the community something regarding hygiene.

I think at this time of another member of our medical fraternity here, Dr. Pratt, who left behind a great work in this city as well as throughout the state. I think of another man who is yet living who has been a very faithful member of our Academy of Medicine, and to see some of his work you need only look about you. This beautiful building, in which we are now assembled, was donated to this city by one of our members, Dr. W. E. Upjohn.

In closing, I want to repeat that I hope this organization will return to our city again in the near future. We enjoy having you here, and if there is anything you want just ask us and we will try to give it to you.

Thank you.

President Moll: The next order of business will be the report from the House of Delegates.

Dr. F. C. Warnshuis: Mr. President, Distinguished Guests, Members of the Society, and Guests of the Society: The House of Delegates, which rep-

resents by each delegate fifty or more members of our State Society, convened yesterday in three sessions.

The members of the House very seriously considered the problems that confront organized medicine today as well as the problems that confront you as individual citizens of this commonwealth of Michigan. I am not going to try to go into detail and give you the results of the deliberations that were enacted yesterday and recorded as another milestone in the progress of our organized Society. These will all be published in due time and course in our Journal, and we ask you not only to read them but to ponder over them and to enact them in your individual administration to your patients and to the community in which you reside.

I shall just briefly report to you some of the results of the election. The President-Elect was George L. Le Fevre of Muskegon, a man who has devoted much to organized medicine, who served his community and the profession in a manner that causes him to merit the honor that was unanimously conferred upon him by the House of Delegates at its session yesterday.

Grand Rapids was selected as the place for our next annual session.

Dr. Heavenrich of Port Huron, Dr. Powers of Saginaw, Dr. Urmston of Bay City, Dr. MacMullen of Manistee, and Dr. Traynor of Big Rapids were elected to membership upon the Council.

The Council elected Dr. B. R. Corbus as its Chairman to succeed himself, and Dr. Henry Cook of Flint also to succeed himself as Vice Chairman. The Council also elected as Treasurer Dr. William A. Hyland of Grand Rapids.

Delegates to the American Medical Association re-elected to represent our organization in our parent national body where Dr. Brook of Grand Rapids, Dr. Luce of Detroit, and Dr. Gorsline of Battle Creek.

This is the 112th anniversary of our organization, as has been commented upon by the president of your local society. For 112 years organized medicine has carried on for the purpose of enhancing the individual benefits of the practitioner of medicine, as well as to carry to the community those things which scientific medicine vouchsafes to mankind in increasing their physical well-being and their longevity.

During these 112 years, we have had as leaders of our organization men who have served their community, who have served their districts, and who have served the state. It is a very proud thing that we can have and can point to this galaxy of men who during these 112 years have so led us on and caused the profession of this state to stand among the leaders in our nation.

So tonight, as our President who is retiring from office, we have such a man, such a practitioner, such a citizen. It is my particular pleasure and distinct privilege to present to you Dr. Carl F. Moll of Flint, our retiring President, who will deliver his annual address.

President Moll read his prepared address. (See October Journal.)

President Moll: It gives me a great deal of pleasure at this time to introduce to you the speaker of the evening, a man whom I have known for many years, a man who stands highest in estimation and regard of the practitioners of medicine in the United States, Dr. Olin West, Secretary and General Manager of the American Medical Association.

President Moll: It now gives me great pleas-

ure to introduce to you my good friend and your good friend, President-Elect J. Milton Robb.

Dr. Robb, the members of the Michigan State Medical Society recognizing your ability as a leader, and as a further testimonial in behalf of your outstanding work in their behalf, have honored you by making you the President of their association, and I, as their spokesman, take pride and pleasure in presenting you with this pin, the badge of your office.

Dr. Robb.

President-Elect Robb: Mr. President and Fellow Members of the State Society, Guests: I am indeed grateful for this honor. This is no empty honor, as the record of my predecessor, Dr. Moll, has shown. I congratulate him.

The unsolved problems in the practice of medicine never have been so varied, so vital and so profound as they are at the present day. The truth of this statement has been very definitely brought to my mind in the past year as your President-Elect.

The matter of these unsolved problems, however, is not confined to medicine alone. The governmental processes of the state, the nation and the world have similar questions to solve, and it behooves the leaders to bend themselves to a new discipline, a new effort, if the ships of state are to be piloted into peaceful waters. It is a time for unusual courage; it is a time for unusual sincerity; it is a time for action. In other words, an outstanding clergyman in this country has said, "When difficulty is double, double effort."

This is my challenge to you and to myself as your President. The faith and being of our people, as well as our profession, depends less upon external factors than that we remain true to our moral traditions which have carried us through the centuries despite the storms that have broken in upon us in the service of life, and particularly at this time sacrifice becomes a grace.

President Moll: Gentlemen, I still have a further honor and privilege in store for you, to present to you a man who really needs no introduction to this audience, a man who has stood for the best there is in medicine for the last thirty-five years, a man who has served you and your Society well. I take great pleasure and honor in presenting President-Elect Le Fevre of Muskegon.

President-Elect Le Fevre: I feel like a child tonight who should be looked at but not heard.

I want to thank you all for the honor you have given me, and I hope I will fulfill the office to your satisfaction.

I thank you.

President Moll: We thank you for your kind attention and for coming here. This now concludes the program, and we will stand adjourned.

The meeting adjourned at nine-ten o'clock.

F. C. WARNSHUIS, *Secretary*.

HOUSE OF DELEGATES

Tuesday Morning Session

September 13, 1932

The opening session of the 112th Annual Meeting of the House of Delegates of the Michigan State Medical Society, held in the First Presbyterian Church House, Kalamazoo, Michigan, September 13, 1932, was called to order by the Speaker, Dr. Henry J. Pyle of Grand Rapids, at 10:10 o'clock.

The Speaker: Please recognize Dr. Reeder as the Sergeant-at-Arms of this session. Will you please bring in the Chairman of the Credentials Committee?

Dr. A. A. McNabb (Kalamazoo): There have been fifty-seven credentials presented. Fifty-two of them are on regular credential blanks. Five delegates have lost their credentials and have written out blanks with their names as follows: L. W. Switzer, A. A. McNabb, A. V. Wenger, C. T. Ekelund, John Sundwall. It will be a matter for the Society to determine what to do with these. Dr. John Sundwall is here in place of Dr. Langford.

Dr. A. P. Biddle (Wayne): Is he a regularly elected alternate?

Dr. A. A. McNabb (Kalamazoo): I don't think he is.

Dr. A. P. Biddle (Wayne): I move they be seated.

Dr. C. S. Gorsline (Calhoun): I second the motion.

The Speaker: You have heard the motion. Is there any discussion?

The motion was put to a vote, and was carried.

SPEAKER'S BADGE

Dr. J. D. Brook (Kent): A question of personal privilege. Do you remember, those of you who are here, that a year ago I presented a resolution requesting the Council to furnish a proper insignia for the Speaker of this House in conformity with those with which the President and the President-elect are honored. This morning I come here and the Speaker is still adorned with one of the same green badges that every common individual wears. I think at this time we are entitled to an explanation from the Secretary, or the Councilmen present, for this act.

The Secretary: Mr. Speaker and Members of the House: Your Secretary is your servant, and he is very regretful he was not able to present the Speaker with the proper badge that had been awarded to him at your last annual session. I thought it more fitting, more in dignity with the office, that the time be reserved until the present time. So, complying with your mandate, I now present to the Speaker his official badge.

Mr. Speaker, I hold in my hand the signed roll call of fifty-seven accredited delegates. This is a quorum. May I request that some member of the House move that the signed roll call be the roll call of this morning's session?

Dr. L. J. Hirschman (Wayne): I so move.

Dr. F. T. Andrews (Kalamazoo): I support it.

The Speaker: You have heard the motion. Is there any discussion?

The motion was put to a vote, and was carried.

The Speaker: Is Dr. Dutchess here? Will you take the chair, please?

Vice Speaker Dutchess assumed the chair.

The Vice Speaker: We will now listen to the Speaker's address.

The Speaker: The Speaker's address is a part of the program, which is my only excuse for delivering it.

SPEAKER'S ADDRESS

I assure you that I consider it a great honor to have been chosen to preside over this assembly. I believe that you as a group represent Michigan's best citizens. There is no nobler profession than that of Medicine, and when I consider that each one of you here represents fifty members of our profession located somewhere in this Commonwealth, the responsibility of directing these sessions strikes me forcibly.

As I have said before, I do not believe that you are interested in listening to a long address on my part. It is a Speaker's task to listen and not to speak. Furthermore, the President of our Society, the President-elect and the Chairman of our Council, all estimable and serious gentlemen, are to follow me on this program, and it would ill become me to "steal their thunder." Even to mention a few of the problems that confront our profession would take a long time, and if I were to discuss these problems, I might incur your ill favor, for in tackling and dealing with any subject I approach it with a bias that tends toward the radical. The one point I wish to stress is that in all the medical meetings I have ever attended, be they County, State or National, I have never heard one single decision arrived at that did not benefit the public first and the Doctor of Medicine last. The Michigan State Medical Society is an altruistic organization and we should all be proud that we are a part of it. If there ever was a time when we should be loyal to our Organization, it is now. Each and every one of you should, on returning to your respective counties, try to inspire the members of your local society with the spirit of loyalty.

Why is it that so many activities are started that are detrimental not only to the public health welfare

but also to the Doctor of Medicine as an individual? We have been "chisled at" by all manner of groups, and in certain localities hospitals under lay management are trying to dictate to their medical staffs what they shall or shall not do. I understand that this particular subject is to come up in our deliberations today, and personally I trust that it will be dealt with as it should be.

The only way we can defend our position is by standing together. Every Doctor of Medicine not belonging to a county society should be urged to join, and as a member he should be given something to do to aid our Organization. At our annual meeting last year I mentioned the fact that some of those in our profession with the largest incomes were least active in the affairs of our Organization. In my county there has been a great awakening. One of our members who has a national reputation based on scientific attainment, and who we considered had a very large income, has during the past year given days and days of his time trying to straighten out some of the problems concerning our relations to the public. Every M.D. from the quiet, unassuming, family doctor located in some remote corner to the bustling specialist with a big office staff situated in our larger centers should stand with our Organization in all its agreements.

The financial depression has affected the medical profession as keenly as any group, and this fact should bring us closer together. As the hairs of my head grow fewer and greyer it is surprising how many fine qualities I find hidden beneath the rather rough exteriors of some medical men. The day of affluence, as far as material wealth is concerned, is by, I believe, for the medical man. At the end of the day our services will be rewarded, not in the accustomed medium of exchange, but in the realization that we have done something to alleviate the suffering of mankind or have accomplished something toward the physical betterment of the race. The medical profession has never said, "One step is enough for me," but has ever gone forward trying to conquer some of the scourges that beset mankind. When others prayed we have worked. We have every reason to be proud of the efforts put forth by Organized Medicine. If I were to go further with these remarks, it would be only repetition because, as most of you know, this is the fourth time I have taken this particular part in our annual program.

In spite of my limited knowledge of parliamentary procedure I shall try to conduct these sessions in a spirit of fairness to each one of you, and trust that you again will be patient with me and overlook my shortcomings.

The Vice Speaker: The Speaker's address will be referred to the Reference Committee on Society Affairs.

The Speaker resumed the chair.

COMMITTEES

The Speaker: You notice that the appointment of reference committees is placed after the different addresses. If there is no objection on the part of the assembly, I think it would be best to appoint these committees first.

The Chair wishes to appoint the following committees:

Committee on Report of Council

L. O. Geib, Wayne
Frank Reeder, Genesee
L. G. Christian, Ingham

V. H. Vandeventer, Marquette-Alger
G. H. Southwick, Kent

Committee on Society Affairs

G. C. Penberthy, Wayne
A. L. Callery, St. Clair
Philip Riley, Jackson

W. C. McCutcheon, Cass

T. J. Carney, Gratiot-Isabella-Clare

Committee on Miscellaneous Business

C. S. Gorsline, Calhoun
A. G. Sheets, Eaton
B. F. Green, Hillsdale
J. D. Curtis, Wayne
W. A. Manthei, Houghton

We will now listen to our President's address. Dr. Moll.

PRESIDENT'S ADDRESS

Medicine owes much to many men. You as members of this House of Delegates are contributing your share to the upbuilding of modern medicine. Many of you I know are here at this time at a considerable personal sacrifice. It speaks well for the future advancement in scientific medicine that you are so willing and eager to do your bit in the cause of organized medicine. Without organized medicine, scientific medicine would be greatly handicapped.

From time immemorial the Medical profession has had to fight, sometimes for its very existence. Hence the need of organization. Our activities for the past year are most lucidly presented to you in the Council's annual report, and I am sure you will be greatly impressed with the marked extension of its work in every direction, and this in the face of the greatest economic distress in history.

It speaks well for the rank and file of our profession that they have carried on, under the most trying circumstances. The great burden of caring for the impoverished sick has fallen heavily on the shoulders of the physicians. You have met your task cheerfully, you have given the best there is in you and this in the face of an income decreased in some instances to almost nothing.

The reports of your various committees will give you a better insight to the great work that has been done along the many phases in which we have a direct interest. At this time I want to impress upon your minds the fact that on the first of January a new Legislature will convene at Lansing. This Legislature will have presented to its members the report of the "Special Legislative Commission" to study and recommend changes in our laws as they pertain to the Healing Art. Their recommendations will have an important bearing on all new enactments or changes in our present Medical Practice Act. It is very essential that we have members of this body who, if not entirely sympathetic with our ideals, will at least be open minded and not prejudiced. It is not for us as an organized body to dip too deeply into the political caldron, but it is the duty of every individual doctor to exercise his voting franchise, and to vote and use his influence to see that only men of the highest type are elected to office. The most of us have been very negligent in this direction in the past and it behooves us to show greater activity in the future. Our legislative committee has been very active, they have made splendid contacts, and it is now up to you, members of this House of Delegates, to carry this message back to your County Societies, impress upon your fellow members the importance of giving your committee the great support they need, by seeing that the right

type of men are sent to Lansing. Then can we well be proud of our accomplishments in protecting the Society from uneducated practitioners and promoting public health by preventive medicine.

The Committee on the Survey of Medical Services and Health Agencies is doing a most commendable work in a thorough and exhaustive manner. Much good should come out of their labors, but in order that their work can bring the best results, they must have the help and coöperation of every man and woman practicing medicine in this State today.

Your medico-legal committee has had more than its just share of work. Malpractice suits and threatened malpractice suits are increasing. I realize fully that a great many of the claims that are filed are but efforts at retaliation when a doctor attempts to collect a legitimate bill against one of his patients. This type, while annoying, are usually easily disposed of. Quite the contrary is the one that has its inception in the failure of the physician to properly safeguard himself with X-ray examinations, a careless criticism on the part of a brother practitioner, and worst of all that combination of attorney and doctor who are out for blood. Our best protection from all types is the giving of the best service possible, the safeguarding of this service by proper laboratory and consultant checks and a spirit of fairness and tolerance towards our brother practitioner.

We have recently been invited to coöperate with some 12 to 15 groups and organizations of statewide scope, to devise means to lower the costs of government. It is estimated that over 10 per cent of our people are now on the public pay rolls, or are deriving private benefits in one way or another from funds supplied by national or local taxpayers.

A member of our executive committee in a private capacity attended a preliminary conference of this group a few weeks ago. It is my belief that we would derive certain benefits from this contact.

In order to facilitate your work by giving you the opportunity to have sufficient time to thoroughly study any new resolutions introduced into this House, I recommend that action be taken so that a copy of the resolutions to be presented be placed in the hands of the Secretary at least ten days before the Annual Meeting, and that the Secretary shall have a copy of this resolution sent to each delegate and to each alternate of record at least five days before such meeting.

I wish at this time to acknowledge the helpful coöperation and the fine spirit of team work displayed by all of your officers. And to you members of this House of Delegates, I want to express my deep sense of appreciation for the honor you have bestowed upon me, and I am confident that you will show my successor the same courtesies and give him the same loyal support that you have accorded me.

The Speaker: This President's address will be referred to the Committee on Society Affairs.

We will now listen to the address of our President-elect, Dr. Robb.

ADDRESS OF PRESIDENT-ELECT

The lot of the individual doctor has been extremely difficult in these times of stress. His income in actual dollars and cents has almost reached the vanishing point and he is not only bewildered at the unfair treatment fate has accorded him but he has begun to wonder whether fortune will ever again smile upon him.

He is not, however, bending under the load that is daily being imposed on him nor is he lending more than a patient ear to the multitude of panaceas

being offered by self-appointed "fixers" outside the profession. Instead, he is thoroughly conscious of the golden opportunity that is being afforded him to reclaim and add to the honor, dignity and prestige of his chosen profession and he is determined to carry on in spite of economic adversity.

In contrast to the paralysis in activity that is so evident in other fields of endeavor, medicine is continuing its rapid strides towards the solution of many of its scientific problems. The physician may point with pride to the significant contributions being made daily by his fellow-practitioners, who, after all, have not forgotten the "raison d'être" of their existence. Depression or no depression, there has been no let-down in the medical profession's efforts to increase constantly its contributions to human welfare.

The problems of organized medicine are the problems that confront the whole of society today. Distortion of the world's economic structure is responsible for most of them. Foremost among these is the question of adequate and equable distribution of services, which looms before the medical profession as largely as the distribution and absorption of commodities does before industry and business. This highly important question is as near to, or as far from, solution in the one group as it is in the other. No sleight of hand artist can perform the miracle. The investigations, deliberations, and conclusions of committees on costs of illness can solve difficulties in medical practice no more rapidly than economists throughout the world can solve today's economic ills. They can at most only show the error of the way; the solution in either event will be arrived at not overnight, but only after a considerable lapse of time and by the old-fashioned method of trial and error. Even then, it will not be final in every way, for it will have to retain flexibility to make it lasting.

Attempts to speed up the arrival of a solution, while thoroughly commendable, are too often prone to lead us astray and endeavor us to false gods. Such panaceas as State Medicine, Health Insurance, and group practice, which offer, according to proponents, some slight measure of relief, are far from adequate in filling the requirements of either the public or the medical profession in this country. The experience that has accrued from the operation of these methods both here and abroad is valuable only in that it predicts their failure when expanded to large scale application.

I have little to say regarding "State Medicine," except that it bears the same relationship to privately conducted practice as prostitution does to true love: it is expensive, it is insincere, it is degrading, and should have no place in the scheme of life of a free people.

As for "Health Insurance," no type that is now in effect or that has yet been proposed has for its primary object the welfare of those whom it is designed to serve. Rather is it planned to benefit the organizers and proponents *first*.

Basic human traits militate against the success of any scheme of health insurance that at once deprives the patients of free choice of a physician, severs the sacred relationship between these two, and frees the patient from the necessity of meeting the full costs of medical service himself. As has been recently said, "When health insurance enters, the will to get well diminishes and withers, especially in times of stress when the cash payment during illness is so helpful to the family budget."* The facts are that the individual who personally pays for medical service does not malingering, while the

*Dr. Henderson, President of the Minnesota Medical Society.

individual who does not personally pay for medical service will, by virtue of the weakness of human nature, be tempted to malingering.

Furthermore, the lay people are not the only ones who suffer from the frailty of human nature. Too often, to the ultimate detriment of those whom they serve, the physicians in these schemes, because they do not feel the immediate need of medical contacts, stray far afield and become mere artisans.

In the past few years there has developed between the Board of Health of the City of Detroit and the physicians of Wayne County a type of co-operation that has been most admirable, in that the public has received a better type of medical service. It would seem that this policy, where the Department of Health acts as a research laboratory and a policing force and the practitioners in medicine spread the gospel of public hygiene and apply the principles developed, is most commendable and should be copied by other communities.

It is lamentable that there are some within our ranks who are aiding and abetting untoward forces, utterly ignoring their obligations to their fellow physicians. Perhaps we are all culpable in some degree because our pursuit of scientific facts and the demands of our practices have afforded us little time to note passing events, and have kept us from concerning ourselves with or adapting our activities to an ever-changing communal and political environment. We have perforce then left to relatively few of our members the protection and conservation of our extra-professional interests, and to these we must give our unstinted support. Unfortunately, we have too often stigmatized these hard working men by the term "medical politicians," while they were seriously and at great sacrifice laboring to conserve our interests. By criticism we have too frequently undermined their efforts and to some extent defeated their aims. We must at all times give credit to those who for years have been active in the interest of medical practice (I regret circumstances prevented my earlier participation) and look to them for leadership.

The pressing needs of the day are:

First, loyalty to our organization and the subscribing of unreserved support to our officers and leaders in county, state, and national ranks.

Second, more conscientious and whole-hearted participation in movements directed towards contacting the public, the government and the business agencies of every community, this for the purpose of building and molding sound and favorable public opinion towards the science and art of medicine; of explaining how the latter can best be utilized in conserving life and health; and of frustrating the attempts of all who would barter human life for personal profit.

Third, inculcate a determination and zeal in all physicians to practice modern medicine; to make a sustained endeavor to remain abreast of expanding knowledge; and to fit themselves to apply that knowledge in daily practice. This can be accomplished by systematic study and reading; by attendance at county, district, and state medical meetings; and by embracing the opportunities for post-graduate work that are constantly brought to their very doors.

Fourth, be ever mindful of the rights, privileges and interests of your fellow doctors. In this respect, do not become a party to or participate in any plan, scheme or proposal that has for its purpose the provision of medical care to groups, units, or members of clubs or companies at fixed yearly remuneration.

As representatives of the members of this Society, it becomes your duty to instill in your constituents the observance of the fundamental principles that have here been outlined, and impress upon them the

importance of concerted thought and action in place of scattered opinions and selfish preferences.

As delegates, you determine our Society's policies, instruct your officers, and endow them with power. Let sane and unselfish judgment prevail. This is not the time or place for individualistic gain or quest. The good of the whole must ever predominate. Let your enactments conform to that principle. Record your confidence in your officers, and assure them of your trust. To do so will instill in them intensified zest and achieving effort.

The Speaker: The President-elect's address will be referred to the Committee on Society Affairs.

We will now listen to the Council's annual report.

The report of the Council was presented by Dr. B. R. Corbus, its Chairman.

COUNCIL'S ANNUAL REPORT

To the House of Delegates—
Gentlemen:

The Council transmits this as its Annual Report to the House of Delegates.

MEMBERSHIP

On January 1, 1932, there were 3,235 members in good standing, a loss of 191 members.

The Council has seriously concerned itself with the problem of enabling members financially embarrassed to continue in good standing. Toward this end a temporary reduction of dues in the amount of \$2.50 was enacted. Arrangement was also made whereby a member might give a note, payable in one year, and continue in good standing. Some 45 members have taken advantage of this opportunity. This is not as many as we anticipated. County Secretaries should again call the attention of delinquent members to this method of retaining their membership privileges.

FINANCES

The official audit on January 1, 1932, reflected a present worth of \$33,621.34. Of this amount, \$11,575.17 represents the reserve of the Medico-Legal fund. In common with all reserves of business and organizations we have encountered a material decrease in the value of securities owned. The loss has been proportionately small, twenty-five to thirty per cent, and we hope that this will be further lessened as the market improves.

Our income for the year will be much less than in any recent year. This is due to both decreased dues and delinquent dues. In addition, the income from JOURNAL advertising is very much less, although this will be partly compensated by reduced publication expense. We recognize that we will show, at the end of the present year, a deficit which we will not be able to overcome by the most strict economy, an economy which included a very marked cut in all budget items instituted at the beginning of the current year.

As the activities of our organization have multiplied, so have the expenses of carrying on the work increased. Committee expenses, especially those committees appointed for some special work, have been no small item in these increased expenditures. The Council has, in the past, made ample appropriations for these purposes. It is essential that these activities be continued and sufficient funds will be assigned for the proper functioning of all committees. Committee members give liberally of both their time and their energy. They should not be asked to go into their own pockets for expenses, but we request all committee chairmen to bear in mind the limitation

of funds, and keep their expenditures as low as possible. In these days of stress and financial upheaval we have even greater responsibilities and obligations than in normal years. These must be upheld. We must not be led by an unreasonable desire for economy to a retrenchment that would negative or destroy the accomplishments which have been brought about by the expenditure of money and thought throughout the years.

The Council realizes the importance of providing adequate support for the Committee for the Survey of State Medical and Social Agencies. The value of the survey is, to some considerable degree, dependent upon the work being pushed as rapidly as may be to its conclusion. Expected funds from outside sources, probably because of the general financial condition, have not been received. The work will go on to the fullest extent that our finances will permit.

The Council desires and proposes, so far as possible, to continue each and every activity that contributes to our members' welfare, together with those social obligations which the Michigan State Medical Society has accepted as its public duty. Your support of the endorsement of this policy is recommended. The Council has every confidence that the Society will come out of this period of depression stronger than ever. We are fortunate in having built up a reserve by careful economy to carry us through the next year or two. Activities under way will not be interrupted.

MEDICO-LEGAL

At no time in the past has our Medico-Legal Committee so frequently been called upon to aid in the defense of members. Suits, threats of suits and trials have been numerous and exceedingly expensive. In a much greater degree than usual the suits have been based on flimsy grounds. To a greater degree than usual they have had their origin in well defined geographical areas. The names of certain attorney firms using certain doctors as witnesses appear so often in different trials that it suggests that the combination is something more than a mere coincidence. As good citizens, it should be the aim of every doctor, on the witness stand, to give honest testimony and aid the cause of justice. However, a member of this Society who stoops to testify against his brother practitioner, animated by enmity, malice, envy or the expectation of financial gain, can not expect his Society to tolerate him. In this connection we call once more to your attention that the careless critical word or comment based upon rumor and not fact, is too often the occasion for dissatisfaction of the patient and the resulting suit.

WOMAN'S AUXILIARY

Your body last year endorsed the Woman's Auxiliary and recommended the organization of auxiliaries by County Societies. The Council notes that four counties complied with your recommendation. The Council feels that there are several of the larger societies that might well enlist this support in the solution of county problems. Delegates should bring this to the attention of their local society and inspire formation of an auxiliary. Officers of the State Auxiliary will willingly assist in organizational work.

SURVEY OF MEDICAL SERVICES AND HEALTH AGENCIES

Under the able management of Chairman Marshall and his committee, and directed by Mr. Sinai, who has been employed for the purpose, the work proceeds along well defined lines. The Council and the Executive Committee, who have kept in close touch with the work, are satisfied that the results

will justify the expenditure of the money and labor. Frequent conferences have been held in the past year by the Executive Committee and representatives of the Survey Committee.

RADIO COMMITTEE

The Council commends the work of the Radio Committee created by the House of Delegates last year. The Council has provided funds to enable the committee to accomplish the work which the committee imparts in its report to your body.

POST-GRADUATE CONFERENCES

In conjunction with the Department of Post-Graduate Medicine of the University, the Children's Fund and the Kellogg Foundation, the Council has continued to make available most desirable post-graduate opportunities within our state. It is gratifying to witness the increasing number who avail themselves of these opportunities for professional enhancement.

The endeavor is, and will be, to meet the demand and interests of members and to make available to them the post-graduate work for which they express desire.

Regional conferences have been conducted whenever a region or Councilor District has requested them.

THE JOURNAL

The Council knows that you join us in our pride in our JOURNAL. Finances alone restrict the enlargement of its features. Its size and content is at present necessarily limited by income. The limitation may be markedly relieved if our members will but concern themselves by according greater patronage to the advertisers.

Members are again reminded that each issue contains reports of work and progress on the part of the Council, Committees and Councilor Districts. Monthly perusal of the JOURNAL will enable every member to keep informed as to our Society activities and obviate ignorance when organizational affairs are discussed or action solicited.

CONCLUSION

The present period demands equanimity. It is not a time for radical changes or innovations. Steadfastness of purpose, the maintenance of self confidence and a sustained loyalty to the objects and purposes that have characterized our society for over a century, should characterize our policies.

Pressing and distressing as are many of our individual worries and situations, faith and courage must not be abandoned. The tension of the times, it is true, tells upon our nervous make-up and the unreliability of the economic picture intensifies unrest. It would be regrettable were we to be precipitated into ill-considered action. If we ever needed a united progressive front we need it now. We are all in a jam, but if sane judgment prevails increased fellowship will come and with it a spirit which will lead to a greater solidarity.

Unapproved schemes, plans and proposals of hospitals, clinics, corporations, lay organizations and insurance companies should not be embraced or fostered by the individual or small group to the detriment of the profession in your community or the state. Pressing as may be the individual need for the moment, tempting as may be the personal inducement, remember that to yield would be but to crucify the entire profession, cause to be relinquished our professional prestige and reduce us to the ranks of mere paid artisans.

The Council will ever maintain a close contact with passing events. It will seek to represent you

and your interests. It will study and analyze every proposal and plan advanced. It will endeavor to outline policies and procedures that are sound and constructive. Let us be swayed neither to the right nor the left but all remain steady, till society again initiates prosperous days.

Respectfully submitted,
THE COUNCIL,
By B. R. CORBUS, *Chairman*.

The Speaker: The report of the Council will be referred to the Committee on Report of the Council.

The Speaker: Next is the report of the Committee on Civic and Industrial Relations.

The Secretary: The reports of the standing committees of the House have been published in the September JOURNAL. They are reprinted again in the handbook program you have in your hand. May I suggest that it will conserve time if the chairman of each of these committees, in place of reading the entire report this morning, be given a few minutes to touch the highlights or say anything he wants of an explanatory nature.

The Speaker: Is there any objection on the part of the assembly to handling this matter this way? If not, we will ask the chairman of the Committee on Civic and Industrial Relations to give us a brief résumé.

Dr. Collisi: Members of the Michigan State Medical Society: As the Secretary has said, the report appears published in the official program.

There are just one or two points I may emphasize at this time. First, perhaps many of you have been wondering what has been done about the insurance report question. That is now in the hands of the Bureau of Medical Economics of the American Medical Association. Dr. Leland, Director of the Bureau, has made a very exhaustive national study and has gone so far as to obtain the coöperation of the insurance men. A special committee has been appointed by the International Claim Association with Mr. Robert K. Metcalf as its chairman, and it has already begun an exhaustive study from their viewpoint. We hope within a very short time Dr. Leland will be able to give us a comprehensive report.

Dr. Leland's investigation showed one important thing, in which he says: "According to information received from the State Commissioners of Insurance, there appears to be no statute in the insurance department regulation in any state requiring that physicians shall furnish specific information for such claim proofs. Many of the statutes do provide that there shall be due proof of loss, but the interpretation of due proof of loss is left largely to the insurance companies."

During the coming year your committee believes that its activities should be directed toward a study of the medical care of highway accidents. As you perhaps know, many of these accidents which occur on highways are brought to the hospitals and, due to disputes over liability, the claims are either not paid or else are delayed, and the surgeon and the hospital eventually lose out. Some of the medical societies have already begun studies of this question, and the committee recommend that during the next year its major activity be on this subject.

The Speaker: Gentlemen, you have heard

the review of the report. I shall refer this to the Committee on County Society Work.

Next is the report of the Legislative Committee.

The Secretary: Dr. Carr is not here. The report is printed, and I suggest it be referred to the same committee.

The Speaker: Committee on Woman's Auxiliary. Dr. Heavenrich.

Dr. T. F. Heavenrich: The Committee has no report to make, and there has been no official meeting of the Committee. The Woman's Auxiliary has functioned exceedingly well and has required no help from us.

The Speaker: Report of the Committee on Survey of Health Agencies. Dr. Marshall.

SURVEY OF MEDICAL AND HEALTH AGENCIES

Dr. W. H. Marshall (Flint): Mr. Speaker, Mr. President, President-elect, and Gentlemen: When this undertaking was entrusted to us last January in Jackson it required a good deal of brooding before comprehensive plans could be evolved. However, your committee has worked patiently if not rapidly, because we feel it is best to make haste slowly in these times. Hurry is a failing of the foolish.

Our progress is pretty well outlined in the printed report. You will notice that we deemed it prudent to appoint several sub-committees in order to get the viewpoint of reliable men on several special subjects. We are happy to have someone share our burden and our responsibilities, and I think we are wise in getting many viewpoints on these problems.

The greatest delay in the work was occasioned by the inadequacy of medical directories. It, therefore, became necessary for each county to appoint a Public Relations Committee to check up on the men in practice. This was a staggering task, especially in Wayne, and, therefore, the questionnaire in Wayne has been very much delayed on that account. However, the last questionnaires will be sent to Wayne County this week. The committee in Wayne County have had a tremendous task and are to be congratulated upon having completed it.

Most of the up-state reports are in and are being coded on cards, and they will soon be run through the machines in the tabulating department of the university.

As you know, too, the state is undertaking an economic study of the state of Michigan. This work will be completed in about ten days, although it will require some time to write up the final report.

We are happy to state that we have received very splendid coöperation from the Michigan Manufacturers Association. Last Saturday, Mr. Lovette informed us that 1,500 industrial schedules had been mailed, and he stated that the returns from the manufacturers were very, very good. That is a splendid thing.

We will also receive a great deal of information from the special commission appointed by Governor Brucker to study the public health organization in Michigan. We are well represented on this commission. Their report will be completed this fall.

As your President-elect has pointed out, the outlook for the doctors and the public at the present time is not too rosy. Only last week Mr. Newton Baker, of the National Citizens Committee, pointed out that our people had a very stupendous task ahead in the coming year, and we would probably have a heavier load to carry than last year. Mr. Allen Burns, Executive Director of the Association

of Community Chests, tells us that a staggering sum is needed for relief this year. It is estimated that \$30,000,000 more will have to be spent this year in Michigan than last.

Here is a point of considerable importance. Some time in November Dr. Wilbur's National Committee on the Cost of Medical Care will have completed its work. That will undoubtedly receive a great deal of attention from the press. It is too soon to anticipate the conclusions that will be reached, but some of the statements of Dr. Wilbur seem to indicate that he is going to advocate some system of group medical clinics to be financed by some device whereby savings will be pooled and used for general health benefits. I am not endorsing that, but the statement of Dr. Wilbur is undoubtedly going to bring this whole subject into the limelight very soon.

This week in Detroit the American Hospital Association is devoting a great deal of time to hospital costs. I hope to get down there and get in touch with some of the work. The physician in the hospital and the general scheme of social welfare will be discussed very fully. The increasing number of indigents is making the hospital today a sort of public utility, and making it more and more a public problem. Plans for adjusting hospital care to fit the personal wage earner will be well studied in Detroit this week. We have a very strong hospital subcommittee and they are working on the problem of hospital care as applied to Michigan.

The outlook for insurance deserves our utmost consideration at this time. Last January I told you that the American Federation of Labor had gone on record as opposed to all forms of social insurance, and that we need be in no great hurry about our work. But only three or four weeks ago the Executive Committee of the American Federation of Labor met in Chicago, and here is the astounding thing: They instructed President Green to prepare a bill for federal unemployment insurance. Therefore, gentlemen, this thing has ceased to be an academic question. It has become a practical one.

I have been trying to follow the discussions in the various political platforms, and so far three schemes have been suggested within the last three months. You must remember that the Democratic convention favored local health insurance under state action. You mustn't forget that. Secondly, there have been those who in their political talks have favored individual plans and industry plans. Thirdly, and this is the one that makes me sit up and take notice, the Executive Committee of the American Federation of Labor incline strongly towards the English system, and went on record as favoring federal rather than state legislation. This is no longer an academic question. It has become a practical one.

We must remember that the Workmen's Compensation Act swept this country from 1922 to 1925 like a storm, and in four years the whole program was put across. We know, of course, that there have been certain benefits from that, but there have been an enormous lot of abuses. Whether unemployment insurance and health insurance will do likewise, no one can foretell. We as a profession need to give it considerable consideration and not dismiss it by the stigma of catchy terms. The time is past when we can ignore it. We must give it serious consideration and study its merits, and I am very glad to know that we have an incoming President who is so keenly interested in the study of that.

When will our work be completed? I think the major part of our work will be completed within the next few months. There are enough data on hand from up state now to commence writing up. Most of our committees are pretty well along with their work.

Dr. Sinai feels quite sure that some of the foundations will print our volume, and that we will have no expense in that connection. He is in hopes of that because undoubtedly our report will take 700 or 800 pages.

There is one error in my report to which I want particularly to call your attention. I stated that approximately sixty per cent of the questionnaires had been returned. That is somewhat of an error. On Saturday last only forty-nine per cent of the replies were in. Just why? Because about fifty-one per cent of our profession are not at all interested in the work we are doing. What are we going to do about it? I think it is the duty of the local Councilors and local societies to get after their men who haven't sent in their questionnaires. We hope that Wayne County's reports, which will be coming in within the next few weeks, will materially increase this percentage.

I think an accurate knowledge of the situation at this time is very essential. The German doctors paid no attention to the oncoming storm, and they have had to swallow a bitter pill. The British Medical Association opposed the program when it came up in England, and had nothing whatever to do with shaping a bill that has been most obnoxious ever since. The French have been very much more intelligent and have had a good deal to say about the various forms of insurance that have been put in effect in France.

I would suggest to you gentlemen that this committee be made a permanent one. By that, I do not mean I intend to serve on it. When I am through next year I hope I am through with medical society activities, because this has taken an enormous lot of time. I think there should be a permanent committee on economics. We should apply the principles of preventive medicine to medical economics rather than curative measures. Foresight is only acquired by determining beforehand the signs of trouble. We hope when we draw up our conclusions, and we will take a lot of you men into our confidence before we frame our conclusions, we will have something more helpful to offer than mere criticism. Our profession has a time-honored reputation for fairness, for honorable dealings, for generosity and courtesy, and I think we must maintain this if we are to keep the good will of the people of this state. I am sure we will.

With a little better coöperation from the profession, with the economic studies under way by the university, with the report of the Michigan Manufacturers Association, with the report of the Governor's commission on public health, with the special reports of our sub-committees, we hope to have a report next year, gentlemen, that will be more comprehensive, more accurate, more up to date than any that has heretofore been submitted to any state society. It is of some interest to note that other states are noticing our work, and the state of Pennsylvania recently came up and got our complete system of study and are proposing to carry on the same sort of study in Pennsylvania. From time to time we are hearing from other states on this, and we think Michigan is again blazing the trail to a better understanding of our relations with the public.

May I submit to you, Mr. Secretary, the report up to date on our physicians' schedules? I don't know whether I had better leave this graphic map with you to show the blank spaces.

I thank you gentlemen for your courtesy in listening to me so long, and I solicit your heartiest support during the few more months we have to work on this.

The Speaker: Dr. Marshall's report will be referred to the Committee on Society Affairs.

Dr. H. A. Luce (Wayne): I would like to ask the Chairman of this Committee for a little further explanation with regard to that questionnaire. I know of only one man in Wayne County who has received this questionnaire. That percentage was rather a bad report.

The Speaker: Will you give the gentleman the information, Dr. Marshall?

Dr. W. H. Marshall: I thought I had briefly touched on the reason for the delay in Wayne. We found the American Medical Association directory was perfectly worthless, as far as Wayne County was concerned. Therefore, your Society had to submit a new directory from Wayne. We only received that within the last week or two. Some 240 questionnaires went to Detroit last week. Some more went Saturday, and some more are going today, and by Wednesday of this week all the questionnaires will be in Wayne County.

The Speaker: Does that answer your question, Dr. Luce?

Dr. H. A. Luce (Wayne): Yes.

The Speaker: We will now listen to the report of the Radio Committee.

RADIO COMMITTEE

Dr. W. J. Stapleton, Jr. (Wayne): Mr. Chairman and Delegates: I have only a few things to add to the printed report, and that is to thank all the members of the different societies who have so kindly coöperated in carrying on this new work; secondly, to thank the Secretary's office for their very efficient work. We hope you will all help us in the year to come by giving us your valuable time.

The Speaker: This report will be referred to the Committee on Society Affairs.

We will listen to reports of delegates to the A. M. A.

REPORT OF A. M. A. DELEGATES

Dr. J. D. Brook (Kent): Mr. Speaker and Members of the House of Delegates: I noticed when I went in to breakfast this morning that a goodly number, like myself, were considerably late, from which I assume you are in no particular hurry to go to lunch. I would advise you to get comfortable and get your pipe or your cigarette. If you fall away into unconsciousness I shall not be offended or insulted.

As we go along with this report, you will notice that the Secretary of the State Society is to blame for it all, as he is for everything else that happens, or which doesn't happen.

REPORT OF THE DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION

The eighty-third annual session of the American Medical Association was held at New Orleans May 9 to 13, 1932. The minutes of the House of Delegates are published in the May 21 and 28 issues of the Journal of the Association, to which we respectfully direct your perusal for such details, the citation of which would not only be imprudent, because of their volume, but it would be an unnecessary strain on your good nature and patience as well.

We shall therefore attempt to report to you in the order of their occurrence only such items from the proceedings as in our opinion your interest is reasonably assured, and which by their nature may be individually and collectively profitable to you.

1. From the report of the Committee on Reports of Officers we quote:

"The speaker has called attention to the tremendous responsibility resting on the House of Delegates of molding and guiding public opinion and formulating the fundamental principles that will bring about acceptable readjustments wherein all the traditions and achievements of the medical profession will be conserved and its relationship to the patient and public enhanced. We heartily approve of that recommendation and in furtherance further recommend that the Delegates of the House of Delegates of the American Medical Association tender to their state societies at the annual meeting a full report of the transactions of the House of Delegates of the American Medical Association."

This section of the Committee's Report was unanimously adopted.

From the above we note that the Speaker recommended a full report to this house of delegates. We believe that this subject might with profit be discussed in this House of Delegates, particularly as regards its volume and detail.

2. From the address of President E. Starr Judd we have picked the following which the Committee on Reports of Officers heartily endorsed and which was unanimously adopted.

"We have given consideration to that portion of the President's address in which he says, 'There has been a tendency in some specialties and in certain communities to turn over certain cases to nurses, midwives or technicians. So far as I can see, there is no way to make the conscientious practice of medicine an easy task. And, furthermore, it has been asserted repeatedly that there are too many physicians. Although I do not believe that there are too many physicians, nevertheless, I do think that in order to give the people the best care, the actual practice of medicine must be kept in the hands of physicians.'"

Further we quote the Committee Report from the address of the President-Elect:

"With reference to the President-Elect's comment on the development of a nation-wide scheme of postgraduate medical instruction we recommend that the Council on Medical Education and Hospitals of the American Medical Association promote this work by urging the state medical societies to conduct regional clinical meetings, and that the Council endeavor to provide, as far as possible, suitable information regarding material for such instruction."

Dr. C. S. Gorsline, Michigan, presented the following resolution on Increase of Personnel and Budget, which was referred to the Board of Trustees:

"Whereas, It appears from the suggestion in the address of the President-Elect and from a careful perusal of the published report of the director of the Bureau of Medical Economics that an economic emergency exists in the affairs of practitioners of medicine in general, and

Whereas, It is apparent that substantial progress has been made in the study of medical economic problems and that it appears that certain phases of our economic problems demand the earliest possible consideration in order that the medical profession shall have placed at its disposal the necessary facts for intelligent action,

Whereas, These problems are, in the order of their apparent importance (1) workmen's compensation, (2) health insurance, and (3) contract practice; and

Whereas, The present personnel and finances seem to be inadequate to accomplish speedy results, therefore be it

Resolved, That the Board of Trustees of the American Medical Association be requested by this House of Delegates to provide such additional increase in budget and personnel as may be required to secure this important information at

the earliest possible date consistent with completeness and accuracy of the data assembled."

The Board of Trustees made the following recommendation, which was adopted:

"Relative to the resolution presented by Dr. Gorsline of Michigan, the Board of Trustees reports that it has been giving every possible aid to the Bureau of Medical Economics in order to enable that bureau to secure and publish information on the subjects mentioned, and that as it becomes apparent to the Board that increased budget and personnel are needed, the Board of Trustees will attempt to provide what is necessary."

4. Dr. J. D. Brook presented a resolution on the appointment of a committee by the President for the study of birth control. On motion of Dr. Vander Slice, Illinois, seconded and carried without discussion the resolution was laid on the table for consideration at the executive session. At the executive session it was regularly, effectively and promptly smothered.

5. Dr. Edward A. Hines, South Carolina, presented a resolution requesting a reduction in the subscription rate of the Journal.

The Board of Trustees to whom the resolution was referred makes the following recommendation:

"Relative to the resolution introduced by Dr. Edgar A. Hines, South Carolina, the Board of Trustees reports that careful consideration was given to the matter of reducing the subscription price of the Journal before Dr. Hines' resolution was introduced, as well as on other occasions, and it was not deemed wise or expedient to make any reduction at the present time."

6. From the report of the Reference Committee on Legislation and Public Relation we quote the following, which was adopted:

"Resolutions introduced through the secretary of the Michigan State Medical Society concerning the effect of doles and federal health and sick benefit appropriations were read, and, after discussion, it was decided to approve of securing data bearing on the question and submit such information to the Board of Trustees."

7. The Reference Committee on Amendments to Constitution and by-laws recommended the following, which was adopted:

"When a constituent state association reports that one of its elected delegates and his elected alternate are both unable to attend a specified annual session of the American Medical Association, the constituted authority of said constituent state association may fill the vacancies caused by the absence of both an elected delegate and his elected alternate, and such a substitute delegate or his substitute alternate who presents proper credentials signed by the president and secretary of said constituent state association shall be eligible to regular membership in the House of Delegates of the American Medical Association in such a specified session."

You will note that this paragraph states that "The constituted authority of said constituent state association may fill the vacancies, et cetera." To the best of our knowledge our Society has no such "constituted authority." It therefore becomes the duty of this house of delegates to designate such authority, a duty to perform at this session of the House.

8. In a supplementary report of the Judicial Council, a portion of which we present, Dr. George E. Follansbee, chairman, very earnestly presented the following, to which we direct your special attention:

"The privilege of healing the sick as a profession is a right granted only to those properly qualified and licensed by the state. It is a privilege belonging only to the medical profession. It is a sacrifice of professional dignity that this exclusive right of medicine is so often sold for individual gain or its possessor deprived of it against his will. In increasing numbers physicians are disposing of their professional attainments to lay organizations under terms which permit a direct profit from the fees or salaries paid for their services to accrue to the lay bodies employing them. Such a procedure is absolutely destructive of that personal

responsibility and relationship which is essential to the best interests of the patient.

Outstanding examples of this type of unearned gain are not difficult to find. There are insurance companies administering workmen's compensation benefits wherein the salaries or fees paid to the physician by the insurance company are so much below the legal fees on which the premium paid by the industry is based as to furnish a large direct profit to the insurance company. As mentioned in a former report of the Council, certain hospitals are forbidding their staffs of physicians to charge fees for their professional services to 'house cases' but are themselves collecting such fees and absorbing them in the hospital income. Some universities, by employing full-time hospital staffs and opening their doors to the general public, charging such fees for the professional care of the patients as to net the university no small profit, are in direct and unethical competition with the profession at large and their own graduates. They are making a direct profit by a practice of questionable legality, from the professional care. There are other examples which could be cited, but those mentioned suffice."

9. Dr. W. F. Braasch, chairman of the Reference Committee on Reports of the Board of Trustees and Secretary, read a lengthy, detailed committee report, which upon certain activities showered sharp criticism, which provoked thunderous discussion on both sides of the fence on the part of fifteen delegates. Among the items cited in the report were The Journal, Hygeia, Quarterly Cumulative Index Medicus, Library Council on Pharmacy and Chemistry, Bureau of Health and Public Instruction, Bureau of Legal Medicine and Legislation, Income and Expenditure, and Bureau of Medical Economics. We feel that perhaps there was basis for some of the criticism, but the general tone of the report seemed to be that there was an excess of centralized authority. With certain deletions, not published, the report was adopted by paragraphs and as a whole.

10. The Committee Report on Report of Board of Trustees and Secretary, and the Report of the Special Committee on Legislative Activities were the high spots in the activities of the House. Dr. C. B. Wright, chairman, Minnesota, who has given a large amount of time to the work of this committee, presented a lengthy report embodying the activities not only of his committee but also of the auxiliary Committee on Veterans Legislation, appointed by the Board of Trustees, of which Dr. Angus McLean is a member.

He presented in detail the proceedings of the various meetings and of the joint meetings with the Committees of the American Legion and American Hospital Association. He summarizes his report as follows:

"First, our committee has established, through the Board of Trustees, a standing committee coöperating with the American Legion, the American Hospital Association and the Veterans' Administration to work out some change in policy in regard to the care of veterans.

Second, we have stimulated the medical legionnaires and the profession throughout the country to interest the local Legion posts in the dangers of federalized medicine from the standpoint of the veteran and the country.

Third, members of our committee have discussed veterans' legislation before the secretaries' conference and before the Annual Congress on Medical Education, Medical Licensure, and Hospitals,

Fourth, we have written and stimulated editorials and articles in the state medical journals on veterans' legislation. In this work Dr. Shoulders has been particularly active.

Fifth, every member of the committee has talked before groups of medical men and legionnaires, not only in their own but also in other states.

Sixth, by stimulating the establishment of a permanent committee in all states, representing the American Legion, American Hospital Association, Veterans' Administration and the American Medical Association, the machinery is gradually being built up for better policy which may come in the future.

REPORT OF THE BOARD OF TRUSTEES

11. It is impossible to convey to you the entire contents of the Board of Trustees' report inasmuch as it covers sixty pages of the handbook. Therefore we touch upon only those subjects considered most essential and valuable to you.

Journal and Membership.—There were published 4,912,439 copies of the Journal with a weekly average of 94,470. During the year, 14,678 names were added to the mailing list and 17,058 were removed. In this connection it is interesting to note that the A. M. A. Directory lists approximately 160,000 physicians in our country, of which nearly 100,000 are members of their state societies. Michigan maintains her position with this average with 5,589 physicians, of which 3,507 are members of the state society.

Buildings and Equipment.—I quote from the Report:

"Because of unsettled conditions with respect to the plans of the city government, it has not yet been possible for the Board of Trustees to acquire one piece of property that will be necessary before building plans can be perfected. Even had this property been available, it would probably not have been wise to proceed with the erection of a new building for the reason that the investment securities held by the Association have depreciated in value in a manner common to all securities. It is gratifying indeed that the Board of Trustees is able to report that the depreciation in the value of the Association's securities has apparently been smaller than similar depreciation reported by various corporations with large holdings."

Hygeia.—Hygeia has maintained its position as an authoritative health periodical for the public and its publication has produced a small net income over operating costs.

Council on Pharmacy and Chemistry.—The Council on Pharmacy and Chemistry has continued to work unceasingly and without remuneration and more recently in coöperation with the Council on Physical Therapy and the Committee on Foods. The investigations published by these organizations are well known to you and are of tremendous value to every doctor and we feel that because of this non-remunerative service proper recognition of it might be formally taken by this house of delegates, and conveyed to the Secretary of the A. M. A.

Concerning intravenous therapy the report says:

"These firms not only played up the spectacular side of the method with suggestions of how such therapy would impress the patient, but some even went so far as to hint at increased fees that would result. Many physicians were impressed and misled by the propaganda; soon concerns that were devoted to the promotion of this form of medication flourished, and many pharmaceutical firms added a line of 'intravenous' preparations to their lists, including solutions of many drugs that are rationally administered by mouth. To offset this propaganda the Council has published warnings against needless intravenous therapy and has rejected preparations recommended for use intravenously when such administration was deemed undesirable or unsafe. The Council recognized that the intravenous use of barbitol compounds may occasionally be justified by the need for rapid action in an emergency such as the control of convulsions of toxic or disease origin, or in certain operations; but it holds that for routine cases the oral or rectal administration is safer and to be preferred."

Bureau of Health and Public Instruction.—The outstanding activity of this bureau is the dissemination of information both over the radio and by the distribution of pamphlets. During the year 205 five minute talks and 120 fifteen minute talks were given and 131,559 pamphlets on various subjects were sold.

Bureau of Medical Economics.—This Bureau, established in March, 1931, is destined to convey to the doctor a large amount of authentic information which he does not now possess. Its functions as listed are:

"(1) to collect, tabulate, study, criticize and prepare for publication and distribution data pertaining to the economics of the practice of medicine; (2) to furnish critical and constructive information and opinions by correspondence on the several phases of medical economics; (3) to encourage the adoption by individual physicians and medical societies of modern, sound, ethical business methods; (4) to urge medical schools to provide medical students with information concerning the economics of medical practice, and an outline of essential business principles which should be incor-

porated early in individual practice; (5) to develop, ultimately, a consultation service with respect to medical business methods."

We feel that our membership should be more completely informed regarding the activities of this Bureau and therefore suggest, since the report covers nine pages of the handbook, obviously too long to be included in this report, that it be published in our State Journal. We also recommend to you the reading of an article entitled, "Collecting Medical Fees," by R. G. Leland, M.D., Director of the Bureau, published in the April, 1932, number of the American Medical Association Bulletin.

Bureau of Investigation.—This bureau has been in existence for a number of years and its activities have to do with the exposition of quacks and quackery and the nostrum evil. A typical illustration of the work of this bureau may be found on page 578 of the August 13 number of the Journal of the A. M. A. which depicts graphically the exposure of the notorious B and M consumption cure.

From the Auditor's report to the Board of Trustees it may be interesting to note that the net worth of the American Medical Association as of December 31, 1931, was \$3,032,032.35.

Toward the close of the Tuesday afternoon session Dr. Burt R. Shurly, Section on Laryngology, Otology and Rhinology, presented the following resolution, which was approved by the House on Thursday upon recommendation of the Reference Committee on Legislation and Public relations:

"Whereas, The relief of economic chaos is dependent on the restoration of confidence and stability of thought among the American people in the place of hysteria, confusion and indecision;

Whereas, The Congress of the United States has in contemplation a return to the income tax in effect during the World War;

Whereas, The burden of earned income tax falls heavily as class legislation on the physician and surgeon who works day and night for the small fees he may be able to collect; be it

Resolved, That Congress be immediately advised of the injustice, inequality, and the burden of this taxation on the medical profession in this time of depression and that they be requested to ponder, stop, look and listen to our appeal against injustice to the medical profession of America."

The New Orleans session was not so well attended as usual, only about 50 per cent of the regular registration being recorded. This occurred undoubtedly because of two reasons: (1) The distance removed from the centers of population was considerable, and (2) the economic status of the average doctor. However, the meeting was a complete success. We urge more of our members to attend if possible the A. M. A. meetings. The entire cost of attendance may properly be charged to postgraduate study, since scientific, accurate, up to date, and authentic information is imparted, particularly in the scientific exhibit, which it would be difficult to obtain anywhere else in the country. The possibility of attending the 1933 meeting for Michigan doctors is greatly enhanced because the meeting place selected is Milwaukee.

From a field of candidates composed of Dr. Dean Lewis of Baltimore, Dr. Hugh S. Cumming, Washington, D. C., and Dr. Walter L. Bierring of Des Moines, Dr. Dean Lewis was elected President-elect on the second ballot. Dr. Rudolph Matas, New Orleans, nominated by our Dr. Hirschman, was unanimously elected Vice President. Dr. Olin West, was as usual unanimously re-elected Secretary and Dr. Austin A. Hayden was elected Treasurer to succeed himself. Dr. F. C. Warnshuis was unanimously re-elected Speaker for the 10th successive year, and Dr. A. E. Bulson of Fort Wayne, Indiana (since deceased), was elected Vice Speaker.

What I am about to say now doesn't matter.

Whether the man about whom I say it likes me or whether he doesn't like me, or whether I like him or whether I don't like him, I always like to give everybody his dues if he is entitled to them. For that reason I have inserted the following paragraph:

Our Secretary, Dr. F. C. Warnshuis, presided as Speaker with his usual dignity and efficiency provoked by natural ability and experience. Without flattery and recognizing ability we believe we are justified in saying that Dr. Warnshuis is the most competent candidate among the membership of the house for the office of Speaker, and for this reason your delegates have little or no trouble whatever in re-nominating and re-electing him annually. This combined with the experience and coöperation of your delegates places Michigan in an enviable position in the parent organization.

The Speaker also in his inimitable manner very feelingly referred to the absence of five delegates and officially announced their deaths, one of whom was Dr. A. W. Hornbogen of Michigan.

There are many other things in which you would perhaps be interested but time and space prevents their being chronicled here. Suffice it to say that your delegates endeavor honestly and efficiently to represent Michigan and to uphold and defend the dignified and ethical standards of the scientific practitioners of our society.

All of which is respectfully submitted and signed by your delegates.

J. D. BROOK,
L. J. HIRSCHMAN,
H. A. LUCE,
C. F. MOLL,
C. S. GORSLINE.

The Speaker: This report will be referred to the Committee on Society Affairs.

Is there any new business now?

ENTERTAINMENT

Dr. F. T. Andrews (Kalamazoo): I request the privilege of the floor. Mr. Speaker, Mr. President and Members of the House of Delegates: We feel highly gratified that you men have come here at this time to attend this meeting. You will be welcomed at a later date by a man who is far more proficient than I am, but nevertheless I take this opportunity to extend to you my personal welcome.

We have provided a little entertainment for you, and have appointed a number of men as members of a committee to aid you in making your stay in this city a pleasant one. The committee has picked out a vivid scarlet ribbon with "Committee" printed on it. Why they didn't pick out white, I can't imagine, or at least a little purple. Nevertheless, I would like to introduce to you at this time Dr. John MacGregor, Chairman of the Committee on Entertainment, who will tell you of some of the few things we have in store for you.

Dr. John MacGregor: Members of the House of Delegates: Due to the intensive scientific program which has been arranged for this meeting, the Entertainment Committee was rather handicapped for time

in planning anything for your entertainment at this time.

We have, however, arranged a few things, the main one starting tonight at ten o'clock after the adjournment of the House of Delegates. We are having a buffet luncheon and some entertainment at the Kalamazoo Country Club. All of those who have cars, we will appreciate your driving out there. You will be shown the way. Those who have put their cars in garages or who came in some other way, we will have cars for your transportation out to the country club.

Kalamazoo has been fortunate in having several excellent golf courses here, and we have made arrangements so that you can play at any of the courses you wish. The maps showing the location of the various courses can be obtained at the registration desk, and any other information concerning the courses can be obtained there also.

The Upjohn Company has arranged a very excellent exhibit at their plant, which is just a few blocks from here, and that also comes under entertainment. I know it will be more than worth while for any of you who can get there to attend the exhibit at the Upjohn Company. They are opening their exhibit tonight and tomorrow night from seven to nine for any who can't get there during the day. It takes from an hour to an hour and a half if you want to take a complete trip through the plant. Other shorter trips can be planned at your leisure.

The Kalamazoo Vegetable Parchment Company, which is the world's model paper mill, has extended an invitation to the visiting medical men to take a trip through the paper mills. This is also enjoyable and will be a very instructive trip if you can arrange to get out to the Kalamazoo Vegetable Parchment Company.

I also want to repeat what Dr. Andrews said, if there is anything any of the local members of the Society can do to make your stay here a more enjoyable one, we would appreciate a chance to do it. We wish you would make all your wants known and we will try to fulfill them to the best of our ability.

The Speaker: On the part of the assembly, we will accept the invitations and thank Dr. MacGregor and Dr. Andrews for the information.

Is there any new business, gentlemen?

RESOLUTIONS

Dr. I. W. Greene (Shiawassee): Due to an act passed by the Michigan legislature nearly twenty years ago, there has existed a situation in this state which has worked a marked injustice on the taxpayers and the private physicians and local hospitals. We have accepted that situation rather supinely, as we usually do during good times, but during this period of financial stress it has brought it more to our attention, and particularly to those of us who are interested in the prosperity and the continuance of our local and community hospitals.

On behalf of Shiawassee County, I want to offer the following resolution:

RESOLUTION

WHEREAS, At the present time it is necessary that all State expenditures be carefully curtailed, and

WHEREAS, The State has been put to much needless expense through certain provisions of Act 274

of the Public Acts of 1913, commonly known as the Sick and Afflicted Children's Act, which Act requires that all indigent minors be sent to the University Hospital for treatment, and

WHEREAS, A large proportion of such afflicted minors could be treated at local hospitals with a marked saving to the State, therefore,

BE IT RESOLVED, That the House of Delegates of the Michigan State Medical Society instruct the Legislative Committee of this Society that they use their influence to secure such changes in the Act as will allow the Probate Judges to send such afflicted indigent minors to local hospitals when the examining physician so advises, and be it further

RESOLVED, That the individual members of the State Society be urged to advise their local legislators of the advantages to the State, the local hospitals and the afflicted children, themselves, of such a change in the Act.

Dr. C. T. Ekelund (Oakland): Dr. Greene and I found this morning that we had both been working to the same end. Not having been able to determine priority, we decided we would each read our resolution. I want to preface the resolution with these remarks.

I think perhaps Oakland County has been a larger and a greater sinner in this regard than any county in the state. More cases have gone to Ann Arbor for treatment under this act from Oakland County than from any other county in the state, even from Wayne.

Injustice has been done to taxpayers of the state as well as to physicians. I think the resolution itself is self-explanatory.

The Speaker: These resolutions will be referred to the Committee on Miscellaneous Business.

Dr. E. D. Spalding (Wayne): As chairman of the sub-committee of the Wayne delegation, I would like to heartily and unanimously endorse for Wayne both of these resolutions and, if it is the will of the House, I would like to ask Dr. Whittaker, a member of this sub-committee, to give you a few figures which will support me.

The Speaker: Dr. Whittaker, is your report very long?

Dr. A. H. Whittaker (Wayne): I was going to ask for the privilege of presenting my part of the discussion this afternoon after the resolutions.

Dr. B. U. Estabrook (Wayne): I would like to present this resolution to the delegates for their consideration:

RESOLUTION

WHEREAS, Under the present birth registration law of Michigan, the birth certificate of a child born out of wedlock reveals unmistakably its illegitimacy, which certificate cannot be changed even though the child be legally adopted; and

WHEREAS, Such children and their foster parents are needlessly embarrassed by this stigma; and

WHEREAS, The Child Welfare Committee of the American Legion has resolved to foster legislation

in Michigan to change the present birth registration law in this state to provide a means to legitimize adopted children born out of wedlock;

THEREFORE, BE IT RESOLVED, That the House of Delegates of the Michigan State Medical Society heartily endorses such proposed change of the birth registration law of Michigan.

The Speaker: This resolution will also be referred to the Committee on Miscellaneous Business.

Dr. J. D. Brook (Kent): Mr. Speaker and Members of the House: I have been requested by the Kent delegation to present the following resolution:

RESOLUTION

WHEREAS, The trend of the times has exercised a markedly lessened financial income by which operating expenses of hospitals is defrayed, and

WHEREAS, Many hospitals dependent upon philanthropic gifts have been deprived of this income, and

WHEREAS, There are being initiated plans by hospitals whereby they seek to solicit patients by tendering flat rates for hospital, medical and surgical care, and

WHEREAS, Such a plan or policy is clearly corporate practice of medicine and in violation of existent laws, and

WHEREAS, In these proposed "flat rates" hospitals receive full and adequate compensation for hospital services while the physicians or surgeons are expected to render professional services for a remuneration fee that is wholly disproportional and unreasonably low, therefore,

BE IT RESOLVED, That the Michigan State Medical Society hereby expresses its disapproval and opposition to any and all such plans or policies, and

BE IT RESOLVED, That if, and whenever, any hospital initiates such a plan that the Secretary of this Society shall so inform the Council on Education and Hospitals of the American Medical Association and demand that that hospital be removed from the approved list of hospitals and not recognized as approved for Interne Training, and

BE IT RESOLVED, That County Medical Societies be instructed to prefer charges and accomplish suspension of every member who accepts and serves upon the attending Staff of any hospital following a policy of "flat rate" fees in which the doctor has no voice in determining the fee he shall receive, or any member who shall serve on the Staff of any lay or corporate group that seeks to practice corporate medicine on a flat rate or insurance basis, and

BE IT RESOLVED, That a copy of this resolution be sent to every County Society and Michigan hospital and be given prominent publicity in the Journal.

Dr. Brook: The execution of the principles and fundamentals laid down in this resolution are a matter of individuality on the part of the doctor. He will, or he won't. You have it in your hands.

The Speaker: The resolution will be referred to the Committee on Miscellaneous Affairs.

Dr. H. A. Luce (Wayne): I can readily see that a lot of business is going to be handled by the Committee on Miscellaneous Business, and I make a motion that a special committee be appointed by the Chairman and the Secretary of the State Medical Society to take

care of the excess amount of business that comes up. The Committee on Miscellaneous Business will not be able to handle all of it.

The Speaker: The Speaker was rather at sea.

Dr. Luce: This committee is to be appointed by the Chairman with the advice of the Secretary of the Michigan State Medical Society.

The Speaker: Do I hear a second?

The motion was supported by several.

Dr. L. J. Gariepy (Wayne): I wish to submit this resolution:

RESOLUTION

WHEREAS, Act 231 of the Public Acts of 1923, Section 1325 of the Compiled Laws of 1915, and Section 1546-60 and Section 1601-1611 provide for the procedure for admission of insane, feeble-minded and epileptics to state institutions; and

WHEREAS, Two physicians are required to examine the patient under Act 217 of the Public Acts of 1913 as amended;

THEREFORE, BE IT RESOLVED, That the House of Delegates of the Michigan State Medical Society recommend to the Legislature of the State of Michigan that Act 231 of the Public Acts of 1923, Section 1325 of the Compiled Laws of 1915, and Section 1546-60 and Section 1601-1611 be so amended as to provide that one of the two physicians appointed to make the examination in such cases be the family physician of the person for whom such care is being considered; and that in case such person has no physician the examination shall be assigned to the last physician attending him or her; and that if, after the exercise of due diligence, it be found impossible to obtain any physician who has attended such person, an examiner be chosen from a list of physicians of good standing submitted by the County Medical Society in that community, using such physicians in rotating order.

Dr. Gariepy: I have another resolution that is practically the same only it deals with the afflicted or the indigents.

RESOLUTION

WHEREAS, Sections 5276-77 of Act 293, Public Acts of 1929, provide that medical and surgical treatment and hospital service be rendered for adults and for pregnant women unable to pay the expenses of same and that this expense shall be borne by the State, to be reimbursed by the County; and

WHEREAS, These Sections make it mandatory that a complete history of the case shall be taken by a physician appointed by the judge of probate of the county in which such person or pregnant woman resides; therefore,

BE IT RESOLVED, That the House of Delegates of the Michigan State Medical Society recommend to the Legislature of the State of Michigan that Sections 5276-77 of Act 292, Public Acts of 1929, be so amended as to provide that the physician appointed to make the examination required by this Act be the family physician of the person for whom such care is being considered; and that in case such person has no physician the examination shall be assigned to the last physician attending him or her; and that if, after exercise of due diligence, it be found impossible to obtain any physician who has attended such person, an examiner be chosen from a list of physicians of good standing submitted by the County Medical Society in that community, using such physicians in rotating order.

The Speaker: This particular resolution will be referred to a committee which the Chair appoints as follows: Dr. Luce, Wayne; Dr. Plaggemeyer, Wayne; Dr. Curry, Genesee.

RESOLUTION

BE IT RESOLVED, That Chapter 3, Section 7 M, of the By-laws of the Michigan State Medical Society be amended to read: The election of the officers of the Society and of delegates to the American Medical Association by the House of Delegates shall be held at the last session of the House of Delegates at any Annual Meeting. No delegate shall be eligible for election to the general offices of the society hereby defined as President, President-elect, Editor, Secretary and Treasurer, but may be eligible for election as Speaker or Vice Speaker of the House. Nominations for any office in the Society shall be made on the floor of the House and shall be limited to two minutes. When the Speaker has declared the nomination for any office closed he shall designate a committee of tellers who shall record and count all votes and announce the result of the voting. All voting in the election of State Society officers shall be by roll call. Each delegate responding to the roll call shall stand up and call out the name of the candidate for whom he casts his vote. At the finish of the roll call and voting the tellers shall report the result of such voting and declare the high candidate or candidates elected. Members elected to office shall take office at the close of the last session of the Annual Meeting.

The Speaker: This resolution will be referred to the Committee on Society Affairs.

Dr. J. D. Curtis, of Wayne, presented a resolution beginning with the words, "I move that Chapter V, Section 1, of the By-laws of the Michigan State Medical Society be amended to read:

"The Council is the Executive Body of the Society. It shall determine its own time and place of meeting. Its Annual Meeting shall be held coincident with the Annual Meeting of the Society. It shall have an Executive Committee of five (5) members who shall meet monthly with the President and the Secretary and such other officers as the business interests of the Society demands. The members of the Executive Committee, including the Chairman and Vice Chairman of the Council, shall be elected from the Councilors by the House of Delegates and shall hold office for one year. This election shall follow the annual election of Councilors. Nominations of candidates for election to the Executive Committee shall be made from the floor, five or more candidates being nominated. After the nominations are closed, balloting shall proceed in the usual manner. The candidate receiving the greatest number of votes shall be declared Chairman of the Council and of the Executive Committee; the candidate receiving the second greatest number of votes shall be declared the Vice Chairman of the Council and of the Executive Committee. The next three candidates in order of votes received shall be declared the remaining members of the Executive Committee. In case of a tie, additional ballots shall be taken as necessary to decide the issue; in case of a continued tie, it shall be decided by the chair."

The Speaker: This resolution will be submitted to the Committee on Society Affairs.

A resolution was presented by Dr. E. C. Baumgarten, of Wayne:

RESOLUTION

BE IT RESOLVED, That Chapter 5 of the Constitution and By-laws of the Michigan State Medical Society be amended by the addition of the following sections:

Sec. 11. Before the annual meeting, the Council together with the Secretary of the State Society shall prepare an itemized budget of expenditures for the coming year. This budget shall be submitted to a committee known as the Budget Committee, which shall consist of one delegate from each councilor district each of whom shall be appointed by the councilor of his district.

Sec. 12. The Budget Committee shall carefully review the budget and submit it to the House of Delegates with recommendations. The proposed budget shall require authorization by a majority of the House of Delegates, which shall have the right to approve or disapprove the entire budget or any item thereof, and its action shall be final.

Sec. 13. During the year the Council may when necessary appropriate additional funds not to exceed a total of \$500.00 in any one year. Such additional appropriation shall require a two-thirds vote of the Council at a duly called meeting, a quorum being present.

Sec. 14. Any appropriations other than those above specified shall require authorization by a two-thirds vote of the House of Delegates in regular or special session.

The Speaker: In order to divide the work of these committees, we will refer this to the committee of which Dr. Luce is Chairman.

Dr. A. V. Wenger (Kent): I have here a resolution that was sponsored by the Michigan Birth Control meeting which I have been requested to introduce.

RESOLUTION

WHEREAS, Wide publicity, public information and lay organizational activity is arousing public interest in the problems and methods involved in birth control, and

WHEREAS, The question is of scientific medical and social economic interest and concern, and

WHEREAS, Considerable evidence does already exist of unscientific statements, misconstrued principles and commercial uncontrolled exploitation, and

WHEREAS, birth control policies, advice and application rightly rests with the profession of medicine and should be controlled and directed by recognized medical organizations, therefore,

BE IT RESOLVED, That the Speaker of the House of Delegates of the Michigan State Medical Society be instructed to appoint a committee of five members to be known as the Committee on the study of birth control and charged with the following duties:

1. To gather facts and statistics.
2. To investigate methods and means.
3. To ascertain degree and scope of commercialization.
4. Methods of clinics.
5. Abuse of practice.
6. Lay sponsorship.
7. Formulate conclusions and recommendations.
8. To present its report at the next meeting of this House of Delegates. And be it further

RESOLVED, That pending receipt and action upon the Committee's report, this House of Delegates and the Council refrain from committing this Society to any policy or position.

The Speaker: This resolution will be re-

ferred to the Committee on Miscellaneous Business.

Dr. J. L. Chester (Wayne): Would it be all right to make a motion on this resolution?

The Speaker: I think it would be best to wait until the report of the committee.

Dr. B. L. Connelly (Wayne): I have been requested to submit the following resolution:

RESOLUTION

BE IT RESOLVED, That Chapter III, Section VII(d), of the By-laws be amended to read:

"The number of alternate delegates to the American Medical Association shall equal the number of delegates. Alternate delegates shall hold office for two years. At each annual election candidates for alternate delegate at large shall be nominated in number equal to or greater than the number to be elected. Election of alternate delegates shall be by ballot. The required number of high candidates shall be declared elected.

"Alternate delegates so elected shall have relative seniority according to the respective numbers of votes received by them, and such seniority rank shall be designated at the time of election.

"In case of a tie vote between any number of high candidates, a second ballot shall be taken only on the candidates who are tied. In case more than two candidates are tied they shall be voted on two by two in alphabetical order, the defeated candidate of the second ballot being voted on, with the next remaining candidate, on a third ballot. In case of a tie still resulting, the Speaker and Vice Speaker shall each fill out a secret ballot, one of which shall be drawn at random by the chief teller. In case the Speaker and Vice Speaker are not both present, the tie may be decided by vote of the Chair, or referred to the Council, as the Chair may prefer.

"Any vacancies caused by failure or inability of any delegates to attend shall be assigned to alternate delegates in the order of their seniority as defined in this section."

The Speaker: This will be referred to the Committee on Society Affairs.

Dr. G. O. Penberthy (Wayne): Mr. Speaker and Members of the House of Delegates: This is a resolution that has been referred to by Dr. Brook. While I will refrain from reading the first part of it, it pertains to the activities of the Auxiliary Committee on Veterans' Legislation appointed by the A. M. A., to which Dr. Brook referred.

RESOLUTION

WHEREAS, the Auxiliary Committee on Veterans' Legislation appointed by the American Medical Association has established, through its Board of Trustees, a standing committee cooperating with the American Legion, the American Hospital Association, and the U. S. Veterans' Administration to work out some change in policy with regard to the care of veterans; and

WHEREAS, this Committee has stimulated the medical legionnaires and the profession throughout the country to interest the local legion posts in the dangers of federalized medicine from the standpoint of the veteran and the country; and

WHEREAS, members of this Committee have discussed veterans' legislation before the secretaries' conference and before the Annual Congress on Med-

ical Education, Medical Licensure and Hospitals; and

WHEREAS, this Committee has written and stimulated editorials and articles in the State Medical Journals on veterans' legislation; and

WHEREAS, members of this Committee have talked before groups of medical men and legionnaires, not only in their own but also in other states; and

WHEREAS, by stimulating the establishment of a permanent committee in all states, representing the American Legion, the American Hospital Association, the U. S. Veterans' Administration, and the American Medical Association, machinery is gradually being built up for better mutual understanding, and to prepare the way for any change in policy which may come in the future; and

WHEREAS, this Committee has recommended to the Veterans' Bureau:

1. That no further hospitals be constructed, and that the present veterans' hospitals be used for the care of the psychopathic and neurological cases;

2. That local hospitals standardized and approved by the American Hospital Association be used for the care of veterans requiring hospitalization for acute disease or for diagnosis;

3. That the veteran be permitted to select his own physician or surgeon, provided he be a member of the medical profession, in good standing in his local community; it being understood, however, that all such cases must be reported to the Veterans' Bureau in the district, for its record.

THEREFORE, BE IT RESOLVED, that the House of Delegates of the Michigan State Medical Society go on record as endorsing and approving the activities of the Auxiliary Committee on Veterans' Legislation appointed by the American Medical Association.

G. C. PENBERTHY, M.D.

J. L. CHESTER, M.D.

D. P. FOSTER, M.D.

The Speaker: This will also be referred to the Committee on Society Affairs.

Dr. J. D. Curtis: I move that the Committee on the Survey of State Health Agencies be instructed to give preferred attention to three major problems, 1st—the University Hospital, 2nd—the Crippled Children's Commission, 3rd—the Detroit Receiving Hospital; and that a report of their investigation of these three problems together with recommendations be submitted as soon as possible and without waiting for completion of the study of other matters which the Committee may contemplate.

The Speaker: This is a motion, gentlemen. Is there any support?

Dr. A. H. Whittaker (Wayne): I will support it.

The Speaker: It has been moved and supported. Is there any discussion?

Dr. H. A. Luce (Wayne): I move it be referred to the committee for report this afternoon.

The Speaker: There is a motion made to submit this to a committee, gentlemen. Is there any discussion?

The motion was put to a vote and carried.

The Speaker: The resolution is submitted to the Committee on Miscellaneous Business.

Dr. J. D. Brook (Kent): Most of the resolutions this morning have been more or less professional in character. I think they concern

the doctor. The resolution I have here is strictly political.

The Speaker: The resolution will be referred to the Committee on Miscellaneous Business.

Dr. L. J. Gariepy (Wayne): Believing more frequent meetings of the delegates stimulate greater interest in the Medical Society, and bring forth more suggestions and more changes,

RESOLUTION

BE IT RESOLVED, that Chapter III, Section 1, of the By-Laws of the Michigan State Medical Society be amended to read:

"The House of Delegates shall meet twice annually. One such meeting shall be held at the time and place of the Annual Session and shall consist of such number of sessions as the House may determine and its business require, adjourning from day to day as may be necessary to complete its business and specifying its own time for holding its sessions. The second semi-annual meeting shall be held at such time and place as the House may determine, and shall be conducted in the same manner."

The Speaker: The resolution is also referred to the Committee on Society Affairs.

Dr. L. J. Hirschman, of Wayne, presented the following resolution:

RESOLUTION

WHEREAS, the Wayne County Medical Society has taken cognizance of the achievements of one of its members, Dr. J. M. Burgess, and has elected him to Honorary Membership in that Society; and

WHEREAS, Dr. Burgess has completed forty years' service to the State of Michigan as a practicing physician; and

WHEREAS, Dr. Burgess has served for thirty years as a faithful member of the Wayne County Medical Society;

THEREFORE, BE IT RESOLVED, that Dr. J. M. Burgess be elected to Honorary Membership in the Michigan State Medical Society.

Dr. J. D. Curtis (Wayne): I second the motion.

The Speaker: Is there any discussion?

The motion was put to a vote, and was carried.

Dr. Eklund, of Oakland, presented the resolution:

RESOLUTION

The Oakland County Medical Society has taken cognizance of the achievements of one of its members, Doctor Edmund A. Christian, and has elected him to honorary membership in that society.

DR. EDMUND ADOLPH CHRISTIAN

Dr. Edmund Adolph Christian was born in Detroit on September 7, 1857, the son of Dr. Edmund P. Christian. Dr. Christian was educated in the University of Michigan, receiving the Degree of Bachelor of Arts in 1879, his Medical Degree in 1882, and the honorary Degree of Master of Arts in 1906. Within a few months after receiving his Medical Degree, he became Assistant Physician at the Eastern Michigan Asylum, now known as the

Pontiac State Hospital, where he served under Doctors Henry M. Hurd, James D. Munson and C. B. Burr. Dr. Christian was appointed Assistant Medical Superintendent in 1889, and in 1894 he was appointed Medical Superintendent, a position he continues to hold. This Michigan institution has meant much to Doctor Christian, and he has meant much to it. His service has been an intrinsic part of the growth and development of the hospital, and to him has been due much of the broadening of its humanitarian sphere of usefulness. The Doctor has grown with the institution, and has come to a plane of high authority in connection with the treatment of nervous and mental diseases. He is a member of the Detroit Society of Neurology and Psychiatry, the American Psychiatric Association, the American Medical Association, the Michigan State Medical Society. He was a charter member of the reorganized Oakland County Medical Society, upon its institution in 1903. He served his County Medical Society for seven years as a member of the Board of Directors; he was elected Vice-President in 1910 and directed the activities of the Society as President during the year 1911-12. He was especially active in the Red Cross during the World War period and served as President of the Oakland County Chapter of the American Red Cross for many years.

WHEREAS, Doctor Christian has just completed fifty years of service to the State of Michigan as Assistant Physician, Assistant Medical Superintendent and Medical Superintendent of the Pontiac State Hospital, and,

WHEREAS, he has served for thirty years as a member and for many years as an officer of the Oakland County Medical Society, and,

WHEREAS, Doctor Christian, by his professional zeal, his personal modesty, his directing genius and his gentle courtesy embodies the spirit and temper of those professional principles for which men have been honored from time immemorable, therefore,

BE IT RESOLVED, that Doctor Edmund A. Christian, medical superintendent of the Pontiac State Hospital, be elected to Honorary Membership in the Michigan State Medical Society.

Dr. R. McKean (Wayne): I move its adoption.

The Speaker: Gentlemen, you have heard the resolution. It has been moved that it be adopted.

The motion was regularly seconded.

The Speaker: Is there any discussion?

The motion was put to a vote, and was carried.

Dr. H. A. Luce (Wayne): Inasmuch as the Wayne delegation has had very little to say, and before presenting this resolution, I would like, on behalf of the Wayne delegation, to thank the Committee on Arrangements for securing us such an admirable place for meeting. When we see Monsignor Moll, Rabbi Robb, Elders Collisi and Marshall, and Dominic Brook, we feel that the church was the loser and the medical profession the gainer.

Dr. Luce submitted a resolution.

RESOLUTION

WHEREAS, a recent communication from the Michigan Department of Health under date of August 26, 1932, contained a list of thirty-three biologic prod-

ucts for free distribution, nineteen of which are in no sense emergency measures,

AND WHEREAS, the free indiscriminate distribution of biologic products is of great expense to the taxpayer of the State of Michigan,

AND WHEREAS, the free distribution of products, not of an emergency type by the state savors of unwarranted governmental interference with private industries,

BE IT RESOLVED, that the House of Delegates of the Michigan State Medical Society approve only the distribution of emergency biologic products and further that the Commissioner of Health of the State of Michigan be advised of this action by the House of Delegates of the Michigan State Medical Society.

The Speaker: The Chair will refer this to the Committee on Miscellaneous Business.

Dr. A. G. Sheets (Eaton): I want to offer for honorary membership a man born in 1861, a member of the Eaton County Medical Society since 1896, Dr. A. H. Burleson of Olivet.

The Speaker: Do you make that as a motion?

Dr. A. G. Sheets (Eaton): Yes.

Dr. K. B. Brucker (Ingham): I support the motion.

The Speaker: Is there any discussion?

The motion was put to a vote, and was carried.

Dr. T. P. Treynor: I would like to make a motion that the House of Delegates convey the greetings of this Society to Dr. William T. Dodge of Big Rapids, Past President of our Society and honorary member, who has been prevented in the past three years, due to ill health, from attending these sessions.

The motion was regularly supported, was put to a vote and carried.

Upon motion to adjourn, which was regularly seconded, the meeting adjourned at 12:30 o'clock.

Tuesday Afternoon Session

September 13, 1932

The second session of the House of Delegates convened at 2:55 o'clock, the Speaker presiding.

The Speaker: Come to order, please, gentlemen.

Is the Credentials Committee ready to report?

Dr. A. A. McNabb (Kalamazoo): Additional credentials have been presented, bringing the total number of accredited delegates up to seventy.

I move that the report be adopted.

The motion was regularly seconded, was put to a vote and carried.

The Speaker: We will have the roll call.

The Secretary: I hold in my hands the signed roll call of more than a quorum of this House, and would suggest that some delegate move that the signed roll call be the roll call of the second session.

Dr. W. J. Stapleton, Jr. (Wayne): I make such a motion.

Dr. A. P. Biddle (Wayne): I second the motion.

The Speaker: You have heard the motion.

The motion was put to a vote, and was carried.

The Speaker: We will now listen to reports of committees. The first is the Committee on the Report of the Council.

Dr. L. O. Geib read the report of the Committee on Report of Council.

REPORT OF COMMITTEE APPOINTED TO STUDY
THE ANNUAL REPORT OF THE COUNCIL OF
THE MICHIGAN STATE MEDICAL SOCIETY

Your Committee has given the Report of the Council careful and serious consideration and wishes to compliment The Council on the excellence of the work of the past year. However, there has been some criticism of The Council and we suggest that there be some other manner of organizing the Executive Committee of The Council; we also believe that there should be some new method adopted to create an Annual Budget and a Budget Committee for the study of same. We approve of the contacts that have been made with lay organizations, as recommended by The Council. We appreciate the laborious efforts and sacrifice of time and money made by the individual members of The Council, and we want these men to know that we recognize their altruism which is hereby given formal presentation.

L. G. CHRISTIAN
G. H. SOUTHWORTH
L. O. GEIB

Dr. L. O. Geib (Wayne): I move the adoption of the report.

Dr. W. A. Hyland (Kent): I second the motion.

The Speaker: It has been moved and supported that the Committee's report on report of the Council be adopted. Is there any discussion?

The motion was put to a vote, and was carried.

SOCIETY AFFAIRS

The Speaker: Next we will have the report of the Committee on Society Affairs.

Dr. G. C. Penberthy (Wayne): The Committee appointed to consider the various amendments and changes to the Constitution have carefully considered the various changes suggested, and we as a committee wish to report on the various resolutions independently so that the House of Delegates may consider each one at this time.

In regard to the House of Delegates meeting twice annually, the committee feels that adequate provision already exists in Article VII, Section 3, of the By-laws for such extra sessions.

Dr. J. D. Brook (Kent): I move the adoption of this portion of the Committee's report.

Dr. L. J. Hirschman (Wayne): I second the motion.

The Speaker: It has been moved and supported that this part of the Committee's report relating to the meetings of the House of Delegates be adopted. The Committee has recommended that inasmuch as sufficient provision is contained in our Constitution and By-Laws, the resolution be not adopted. Is there any discussion?

Dr. A. H. Whittaker (Wayne): Mr. Speaker, there is a feeling among the delegates this year, I am sure, although not much has been said about it, that it would be nice to have more than one meeting a year. While it is perfectly possible at the present time to call a special meeting, if the delegates and the various county societies were aware of the fact that there was to be a regular meeting in the mid-year, there would be various plans made for things of interest to be presented at that mid-year meeting, and I would like to say that I am very much in favor of having at least two meetings a year.

The only criticism there has been of two meetings is the expense involved in the delegates coming to these meetings, but I am sure most of the men who are delegates here today and officers of the various county societies in the state of Michigan will be only too glad to spend the one day's time and the little work involved to come to this second meeting during the year.

Dr. Phillip Riley (Jackson): When we considered this we felt that if the delegates thought we should have a second meeting this year we could make a motion today to have the second meeting, rather than amend the Constitution. If the delegates feel there should be a second meeting this year, I move we have one in the middle of the winter some time.

Dr. L. O. Geib (Wayne): I move a semi-annual meeting be called for the first of next year.

The Speaker: Dr. Penberthy will state the original question.

Dr. G. C. Penberthy (Wayne): In regard to the sessions and meetings, I wish to read Article VII: "Section 1. The Society shall hold an annual meeting at such time and place," and so forth. That is the annual meeting.

"Section 3. Special meetings of the House of Delegates shall be called by the Council, on a petition signed by thirty delegates who served at the last regular session of the House. It is distinctly provided that in petitioning for a special session of the House of Delegates not more than fifteen petitioners shall come from one county society."

It is thought that the provision in the present Constitution and By-laws is sufficient to take care of any special meeting that might be called.

The Speaker: From there on we can go on with the discussion. Anyone who wants to put a motion can.

Dr. Riley moved that arrangements be made for a second meeting. Was that your motion?

Dr. Phillip Riley (Jackson): In the middle of the winter.

The Speaker: Dr. Brook's motion was that that portion of the Committee's report rejecting the resolution be accepted as read and that we have no more meetings, because it was the Committee's idea there was already sufficient provision made in our Constitution and By-laws. That is the question now.

The question was called for.

The Speaker: All in favor of Dr. Brook's motion

say "Aye;" contrary, "No." The "Ayes" appear to have it. We can call for a division of the house if you want the votes counted.

All those in favor of the motion arise. (Forty-five.)

Those opposed arise. (Nineteen.)

The motion is carried.

Dr. G. C. Penberthy (Wayne): The Committee endorses the activities and recommendations of the Auxiliary Committee of the Veterans' Legislation appointed by the American Medical Association.

Dr. A. P. Biddle (Wayne): I move its adoption.

The Speaker: Can you give us the substance of the recommendations?

Dr. Penberthy read the recommendations.

Dr. L. G. Christian (Ingham): I move the adoption of this portion of the report.

Dr. F. T. Andrews (Kalamazoo): I second the motion.

The Speaker: You have heard the motion. Is there any discussion?

The motion was put to a vote, and was carried.

Dr. G. C. Penberthy (Wayne): Amendment to Chapter 3, Section 7 d, delegates to the American Medical Association.

The Committee disapproves because the selection of ranking alternates is unsound. If you care to have me read the resolution as presented this morning, it will probably be in order to give you an opportunity to decide for yourselves just what you want to do with the amendment.

Dr. Penberthy read the proposed amendment.

Dr. Penberthy: I might say that the reason for the Committee questioning the advisability of endorsing this recommendation or amendment was the fact that if there was some question as regards alternates at the last moment an individual might be elected unanimously, even by ballot, and thereby be declared the senior alternate.

The Committee considered that an unsound amendment. I wish to refer it to the House for their decision.

Dr. A. P. Biddle (Wayne): I understood that one of the things the Wayne County delegates wanted was that we be privileged to select an alternate with the Secretary of our State Medical Society. As it is, we have only four alternates, and we want to know if this Committee recommends the election of another alternate. There is no alternate elected with *Dr. Warshuis*, who is, by virtue of the Constitution of the State Society, a member of the House of Delegates of the A. M. A. I just want to know if that is included.

Dr. B. L. Connelly (Wayne): I move that the report of the Committee be rejected and that the By-law as proposed be made a part of the By-laws.

The Speaker: I believe there was a motion before the House before *Dr. Penberthy* made further

comment. Is the Chair correct there? (Cries of "No.")

Dr. Biddle: I am asking for information. How many alternates have we under your resolution? We should have five alternates.

Dr. J. J. O'Meara (Jackson): I second the motion of *Dr. Connelly*.

The Speaker: *Dr. Biddle* has asked for information, and I would like to have that information given to him.

The Secretary: There are four alternates.

Dr. E. C. Baumgarten (Wayne): I believe *Dr. Connelly* had some correspondence with *Dr. West*, who I think has clarified the situation about which *Dr. Biddle* asks. Maybe *Dr. Connelly* could explain that.

Dr. B. L. Connelly (Wayne): I don't have the letter of *Dr. West* with me, but he says we are entitled to the same number of alternate delegates as delegates. We are entitled to five delegates, and as I understand it we should have five alternates.

The whole purpose of this amendment is merely to clarify that section as it reads in the By-laws. At the present time there is no method of selection outlined, there is no method of seniority worked out, and the purpose of this amendment is merely to clarify who is the senior alternate, and who shall take the place of any duly elected delegate who is absent.

As far as the report of the Committee is concerned, this amendment provides that there shall be an equal or greater number of candidates for alternate delegates as we are allowed, and this shall be by secret ballot. I don't see how it is possible to figure out that any man can be elected by acclamation there, because it specifically provides for ballot.

Dr. G. C. Penberthy (Wayne): I think if *Dr. Connelly* would incorporate in his amendment that the alternates be designated as one, two and three, it would clarify the whole situation.

Dr. B. L. Connelly (Wayne): It provides for a seniority there, which shall be according to the number of votes they receive. Call them one, two or three, or anything you want—A, B or C. The seniority is determined by the number of votes they receive. The name of the thing isn't important at all. It is the seniority that is important.

Dr. R. McKean (Wayne): May I ask for information. What is the advantage of voting for two and having to draw one and get in on the next vote? Why not vote for the four or three of them at once, and put them in their order and vote at that time?

Dr. Connelly: I think *Dr. McKean* has entirely misunderstood the amendment. I think it would be a wise plan to read it over again. That is only in case of a tie.

Dr. McKean: I know that. Why should the tie be voted three times?

Dr. Penberthy read the section dealing with the matter of tie votes.

Dr. L. J. Hirschman (Wayne): May I ask to have the Secretary read that portion of the Constitution and By-laws of the State Medical Society and also the A. M. A. on the election of delegates and alternates so we may know what the present procedure is.

The Secretary: Mr. Speaker and Members of the House: Our Constitution is silent as to the election of delegates. It simply infers that part of the duties of this House is to elect its proper number of delegates to the parent organization, the American Medical Association.

The number of delegates that Michigan is entitled to is allotted every three years according to

our membership and our ratio. The House of Delegates of the A. M. A. is limited to 175 delegates, and according to the membership of the various states in the country it is one delegate to every 700 or 600 or 800 members, so as to give that one delegate for each group of members, which gives us under our present membership five delegates.

It also provides in our By-laws that we shall also elect alternate delegates. It is the rule of the House of the American Medical Association that delegates shall be elected by constituent state organizations, and that they shall have each alternate elected as a delegate for the individual, or alternates-at-large. The point of it is that a good many states have lost representation because they elected delegates as alternates of individuals. For instance, if Dr. Biddle was elected as an alternate of Dr. Hirschman, and Dr. Hirschman couldn't go and Dr. Biddle couldn't go, we wouldn't have a delegate in the House of the A. M. A. But if we elected Dr. Biddle as one of the alternate delegates-at-large, Dr. Biddle could serve for any one of our regularly elected delegates and we would have our five delegates in the House of the A. M. A.

Dr. L. J. Hirschman (Wayne): Will you inform the House whether the alternates are elected as alternates-at-large?

The Secretary: They are elected as alternates-at-large, and are so certified to the Secretary of the A. M. A.

Dr. A. P. Biddle (Wayne): How do you select your alternate?

The Secretary: My alternate has always been selected by the Council or the Executive Committee of the Council. They have adopted somewhat the precedent of electing a man oldest in service. If one man was elected as alternate this year and another had been elected an alternate-at-large last year, the man who was elected alternate-at-large last year would be the one who would serve.

The Speaker: Is there any further discussion of Dr. Connelly's motion? I trust the assembly is clear on the point.

Dr. J. J. O'Meara (Jackson): In these last years in the election of an alternate, it hasn't happened as our Secretary said. I believe Riley of Jackson was elected two years ago at Jackson, and he wasn't sent as a delegate to the A. M. A. last year.

The Speaker: Is there any further discussion? So the question may be clear, Dr. Penberthy's Committee sent in an adverse report on that resolution. Dr. Connelly's motion is that Dr. Penberthy's report be rejected. Are you ready for the question?

The question was called for, and the motion was put to a vote and carried.

Dr. B. L. Connelly (Wayne): Will you please repeat my motion to the House? You did not repeat it in full and we voted on it without having the complete motion before the House. Some of the men feel that the report is not accepted.

The Speaker: It has been rejected. That is the way the Chair rules.

Dr. Connelly: To clarify the situation, I move the amendment as proposed this morning be adopted.

The motion was supported by several.

The Speaker: Dr. Connelly moves that the amendment as reported this morning be adopted. Is there any discussion?

Dr. L. J. Hirschman (Wayne): May we have that amendment read before we vote, so we can vote intelligently?

Dr. Penberthy read the entire amendment.

The Secretary: May I suggest that you put in there "alternates-at-large," because if you don't you are going to get hung up.

Dr. B. L. Connelly (Wayne): I will accept that.

The motion to adopt the amendment was put to a vote, and was carried.

Dr. C. T. Ekelund (Oakland): It seems to me I recall that somewhere in the By-laws it requires an amendment before the next session.

The Speaker: That has to do with the Constitution. This is a matter of By-laws, and you practically had previous notice on it saying it was going to come up, so I believe the Chair will have to rule the amendment was adopted.

Dr. G. C. Penberthy (Wayne): The amendment to the By-laws pertaining to election of officers by roll call is disapproved by the Committee.

Dr. A. P. Biddle (Wayne): I move the adoption of the report.

Dr. L. O. Geib (Wayne): I move the report be rejected.

Dr. L. J. Gariepy (Wayne): I support it.

The Speaker: You have heard Dr. Geib's motion that this part of the Committee's report be rejected. Is there any discussion?

Dr. L. J. Hirschman (Wayne): I believe we ought to think this over very carefully. If this is rejected and the procedure advised is adopted, we are violating the first principles of American citizenship, the right of initiative and untrammelled thought and action. In other words, you are destroying the secrecy of the ballot. There is nothing I would personally vote for that I wouldn't tell somebody about. There may be some reason why some individual may not want to declare these things. I think he should have that privilege.

We have adopted the secret ballot for the election of alternates, and now we want a roll call for the election of officers. It is un-American and unparliamentary, and it is going to disturb the whole machinery of this society. I hope the motion to reject the report does not prevail.

Dr. J. D. Curtis (Wayne): I want to take very vital exception to Dr. Hirschman's statement. He said this was un-American and unparliamentary. He is wrong both ways. This is a representative body and you are representing other men. They have a right to know how you vote. That is what happens in your House of Representatives. That is what happens in your state legislatures. Therefore, it is not un-American. As far as being unparliamentary is concerned, I am sorry to contradict you because it is parliamentary.

Dr. R. H. Denham (Kent): The question just brought up is on measures, not on officers; not on the election of officers, but on the election of measures. In the House of Representatives they vote on measures, but in voting for officers your vote is always secret.

Dr. L. O. Geib (Wayne): On this motion, I also take exception that this thing is un-American. In the United States Senate, the person the President wishes to elect or appoint to some legislative or diplomatic position has to be confirmed by the Senate. That appointment is voted on by roll call, and it is right that it should be that way because the Senator or Representative is not representing himself; he is representing the people back home.

A few years ago, until the session at Benton Harbor, this method was correct because at that time the President and Vice President, and so forth, were elected by the members-at-large, and any man in that situation can vote as he pleases, but this is a different situation. A man should be labeled as to the

man he votes for, and the people back home should know he was voting for the very best man obtainable. If he doesn't do that, he is answerable to them for his vote.

Dr. P. D. Amadon (Monroe): Personally, I don't see the urgency of trying to rush something like this through. This may be constitutional, and all that sort of thing, but I don't see how we can glibly pass this without some consideration. Here is something that came up two or three hours ago, and now we come in here and want to change the Constitution after two or three hours' consideration.

First of all, the committee reports that they think this thing should be rejected. They have given it more thought than we have, and they don't approve of it.

The question was raised here that our constituency have a right to know how we vote on this thing. Our constituency won't know a damned thing about this because we aren't going to tell them. We are going to rush it through in one session and nobody is going to know anything about it. I think it should be given further consideration and not be voted on today.

Dr. A. E. Catherwood (Wayne): When this was brought up at the meeting we had in Wayne County I objected to it. I still object to it very strenuously. We have heard this talk about the constituents back home knowing how you vote. If they would instruct us first to vote a certain way, that would be all well and good. We are elected to use our common sense and brains, and I think every one who is honest will do that with a secret ballot. Those same people probably wouldn't do the same thing under all circumstances if it was an open vote. I object to this resolution very much.

Dr. E. D. Spalding (Wayne): In view of the fact that there is apparently a very honest and quite vitriolic difference of opinion here, I move this matter be laid on the table.

The motion was supported by several, was put to a vote and carried.

Dr. G. C. Penberthy (Wayne): The amendment as pertaining to the budget is approved by the committee. For your information, I will read this amendment.

Dr. Penberthy read the amendment.

Dr. E. C. Baumgarten (Wayne): I move its adoption.

Dr. R. McKean (Wayne): I support that.

The Speaker: Is there any discussion, gentlemen?

Dr. E. D. Spalding (Wayne): A minor point about this \$500. Instead of putting this in as a flat figure, I wonder if it would not be better to put this in as a percentage of the whole, and express that as a percentage of the whole, so that if it were a large budget year they would have a little more latitude, and if a close budget year they would have a smaller latitude. I propose that as an amendment.

Dr. E. C. Baumgarten (Wayne): I don't see any reason why that wouldn't be an acceptable amendment, except that *Dr. Spalding* has not stated any particular percentage in his amendment. I believe that would have to be based entirely on past experience as to what the budget was, and I am not familiar with those exact figures and wouldn't be able to give the information.

The Speaker: The question now is on the amendment. Is there any further discussion?

Dr. E. D. Spalding (Wayne): May I ask those who are more conversant with the finances of the Society what proportion of an average budget this flat \$500 figure represents?

The Secretary: About one and one-half per cent.

Dr. Spalding: Instead of saying a flat \$500, state it as a percentage, one and one-half per cent.

Dr. Stone: May I ask a question, please? I am not a member of the House of Delegates. It strikes me as an important issue that possibly the delegates seated here should know the procedure which has been followed for several years back, and I would suggest that your Secretary explain to the delegates the procedure as to making a budget.

The Secretary: Mr. Speaker and Members of the House: The Constitution and By-laws of this House provide that the funds of the Society shall be under control of the Council and that there shall be no expenditures without the approval of the Council.

To adopt and apply the amendment that has been proposed, you would have to rescind that provision of your Constitution and your By-laws.

For the past twenty years, during the chairmanship of *Dr. Stone* as Chairman of the Council, and *Dr. Dodge* as Chairman of the Council, and as long as *Dr. Corbus* has been Chairman of the Council, the Council has had a finance committee composed of three members of the Council. At the present time, *Dr. George LeFevre*, president and chairman of the board of directors of the Union National Bank of Muskegon, is Chairman of the Finance Committee of the Council.

Previous to each fiscal year (our fiscal year is from January 1 to December 31), the Chairman of the Finance Committee of the Council with the other two members of the Finance Committee confer and have a meeting with the Secretary. We go over the expenditures of the previous year. We have the accounts audited by certified public accountants. Ernst and Ernst are our certified public accountants. We have in mind the activities of the Society, the contemplated activities for the ensuing year, and with these facts at hand a budget has always been made. So much has been appropriated for the expense of the Journal. We have had estimated our advertising income from the Journal. From the membership dues there has been allotted some years \$2.50, some years \$3 and other years \$2 which is put into the Journal fund and the Journal is run from that fund of the budget. When the expense of the Journal comes near to that budget amount, or threatens to exceed that amount of the budget, it has always been presented to the Executive Committee of the Council and an appropriation has been made to reimburse that budget of the Journal.

So, too, with so-called Society expense, the expense of the annual meeting, the expense of delegates to the American Medical Association, the expense of our committees, and the expense of our Legislative Committee. All of them have had a budget of anywhere from \$200 to \$3,000, and the present committee on Survey of Medical and Health Agencies has a budget this year of \$5,000. The funds of the Society have always been budgeted and have not been spent promiscuously.

In the arrangement of the budget, as is done by every corporation and organization, a reserve fund is created in which there is an amount usually of from \$500 to \$1,500. In the event of an emergency, as there was a little over a year ago when the poliomyelitic epidemic threatened us, an emergency appropriation of \$1,000 was made by the Council for the preventive work and the educational work. Dur-

ing the past twenty years the Society has had a budget duly appropriated and duly figured out. This has been reported in the mid-winter report of the Council which usually appears in the February Journal each year. Under these conditions are our funds appropriated.

It has been by the management of your officers, your Councilors and your committees that we have in the past been fortunate in building up a reserve. We have a reserve of approximately \$47,000. Of that \$47,000 approximately \$20,000 belongs to the Medico-Legal Defense. The provision is made that in the event the Medico-Legal Committee's expenses during the year exceed the amount appropriated to them, the Council is authorized by a paragraph in your By-laws to make an appropriation from the general funds of the Society for the expense of the Medico-Legal Committee.

These funds have been invested in what is known as A, AA and AAA bonds. They are the soundest bonds known at the time. They consist of bonds of the Pennsylvania Railroad, the Baltimore & Ohio Railroad, the U. S. Steel Corporation, and the 45 Broadway Building in New York, all rated as A, AA and AAA bonds. Probably some of you had bonds and had them go wrong these last few years. As a result of the so-called "repression" in the last few years, our reserve in bonds has materially shrunk so that at the present time the Society has approximately a reserve of \$11,000, and the Medico-Legal Committee has a reserve of \$13,000, or approximately \$24,000 all together. However, our auditors have set aside in our audit statement as our net worth a provisional account of \$13,000 to take care of the shrinkage of this \$47,000 we have in our reserve.

The principle under which the administration of funds has been governed by your Council has been approved by our bankers, and has been approved also by our attorneys.

I do not see (while I can see possibly in a measure the intention of the amendment) how, without the facts I have just imparted to you, the amendment is going to improve the financial administration of the Society, increase the soundness of our financial situation or limit the appropriations of the Society. Possibly Dr. Corbus, as Chairman of the Council, or Dr. LeFevre as Chairman of the Finance Committee, may supplement the rough outline I have given you of the financial affairs of your organization.

Dr. B. R. Corbus (Grand Rapids): Your Council has been just as careful as it can in the administration of funds. It is only those who are very close to our organization in a financial way who can see the possible demands that are going to be placed on the Society in the coming year for the appropriations for the budget.

We would, of course, be extremely careful in the administration of funds, the paying out of funds, and yet I see a great danger in limiting the reserve the Council has to spend.

Take the annual meeting, for instance. We don't have any idea how much an annual meeting is going to cost until we are right at the annual meeting. I think the Secretary might talk to you on that. We are concerned at times. This meeting will cost us \$3,000. We had no thought or idea that it was going to cost us \$3,000. Next year's meeting has got to be very much less. I wish the Secretary would go on with his talk, speaking of the annual meetings and their cost.

Dr. E. C. Baumgarten (Wayne): All these remarks that have been made are undoubtedly quite true, but I still can't see any objection to this House of Delegates, through its members on the

budget committee, having some idea or having something to say as to how its funds are to be expended.

It has been stated that the funds are spent only by the Council. Theoretically, possibly, that is true, but I would like to have a roll call of the Council and ask how many men actually voted before the money was spent as to whether or not the money was going to be spent. As a matter of fact, the Executive Committee has absolute authority, or has had in the past I believe, and even certain fractions of the Executive Committee have taken it upon themselves to disburse funds and have it approved by the Council later. I believe those are facts that can't be disputed. I still believe the House of Delegates should have a right and something to say as to how its money is expended.

The Speaker: Is there any further discussion of the motion? There is an amendment now changing it from a specific amount to a percentage.

Dr. E. D. Spalding (Wayne): Close figuring shows two per cent rather than one per cent is what the figure of \$500 represents, and I would like to put in the figure of two per cent.

The Speaker: Are you all clear on the question? We will vote on the amendment now.

The amendment was put to a vote, and was carried.

The Speaker: We will not vote on the motion as amended.

The Secretary: The motion as I understand it is the amendment offered by your Committee that the budget be formulated by a committee constituted of one member from each Councilor District.

Dr. Penberthy read the amendment concerning the budget.

The Speaker: Are you clear on the question now, gentlemen?

We will vote on the motion as amended.

Dr. Cook: I think there is a question we ought to take up. The budget is drawn up in January and there will be a lapse between this meeting and the January meeting when the next budget is drawn up. A budget should be prepared to be presented to this House of Delegates at this time in order to have a budget to operate on between January 1 and the time the House of Delegates meets again.

Dr. J. R. Rupp (Wayne): I feel we are monkeying too much with our Constitution.

I believe our Society has been functioning satisfactorily as far as the disbursement of its funds, and I hate to see such provisions put in as provided for in this amendment. I would certainly vote against the amendment.

Dr. K. B. Brucker (Ingham): It seems to me this thing is a lot of hooey and a lot of needless monkeying with the By-laws. If the Councilor of each district appoints a delegate from that district who is to get together once a year after the budget is drawn up, and go over this thing, I want to ask you how much this group of men are going to know about this budget. How much are they going to understand about the inside workings of this thing and the necessity for the various items of this budget. It seems to me we should entrust this thing to a Board of Directors made up of the Council and their Finance Committee and leave it to them. Try to throw the whole thing into the House of Delegates and you have a lot of waste motion, it seems to me.

Dr. I. W. Greene (Shiawassee): I think if we should pass this it would be necessary for us to go back and vote again on the question of having two meetings a year instead of one, because if this budget is thrown into a general discussion, from the way things have gone today I think it will take one entire session to discuss the budget. I under-

stood from the motion that after it was passed on by this Budget Committee it was also to be voted on by the House of Delegates. You get a group of men as large as this, they will never agree on all the subjects.

Dr. F. W. Garber (Muskegon): I think in the proceedings this afternoon we have been voting on things without knowing anything about them. It is a good illustration of what is going to happen if we adopt this amendment.

It seems to me absolutely impossible for this House of Delegates to act on questions of this kind on the spur of the moment. It should be something that should be thought out, and on which every man is thoroughly familiar. I am not in favor of the amendment.

Dr. J. D. Brook (Kent): I move this section of the Committee's report be tabled.

The motion was supported by several, and was put to a vote and carried.

Dr. G. C. Penberthy (Wayne): The amendment for the election of officers by the Council and choosing the Executive Committee is disapproved. For your information, I will read the amendment.

Dr. Penberthy read the amendment.

Dr. A. P. Biddle (Wayne): I move the adoption of the report.

The motion was regularly seconded.

The Speaker: Is there any discussion, gentlemen?

Dr. A. E. Catherwood (Wayne): May I ask how the Executive Committee of the Council is elected.

Dr. B. R. Corbus (Grand Rapids): They are elected by the Council.

Dr. A. H. Whittaker (Wayne): The fact that these motions are continually cropping up here along the same tenor shows there must be some dissatisfaction with the present method of choosing the Executive Committee of the Council.

I don't wish to be antagonistic in this matter, but I have heard discussion throughout the state of Michigan that perhaps our present method could be improved on. There is no getting about the fact that at the present time the State Medical Society is run by a group of two to five men. The House of Delegates is supposed to be the representative body of this medical society, and I think the House of Delegates and the Council working together should be the guiding spirit of this Society and not a small group of men. I don't believe our Council of sixteen men is too large or too unwieldy to administer the duties of this Society.

I hope due consideration will be given before we vote, so that the Society will have a greater voice in the choice of men who represent us in the long period of time that exists between our annual meetings.

Dr. J. D. Bruce (Ann Arbor): I think Dr. Baumgarten made a worth-while contribution. I am very sympathetic with this general discussion. He made the statement that sums of money had been appropriated by individual members of the Council and later ratified by the Council. I think it due the Council and the House of Delegates that he give us the instance or instances to which he refers. The Council has no objection, I think, or any member of the Council.

Dr. L. J. Hirschman (Wayne): The Council of sixteen members is elected by the House of Delegates. Nominations are made by each Councilor district. The delegates from each Councilor district

select the man who they feel will best represent their district. If they have selected men in whom they have confidence and whom they trust, they have selected them as the Board of Directors of this organization, this corporation of which we represent the stockholders. We are all stockholders. They meet as often as necessary, sometimes once a month and sometimes not as often. They are all busy practitioners, the same as all the rest of us. They have to go to these meetings and leave their practice to do it, and at considerable sacrifice of time and absence from their work. It is absolutely impossible to get sixteen men to meet as many times a year as necessary to properly conduct the affairs of the Society.

Therefore, wisely, these sixteen men whom you have elected as your representatives, as your Board of Directors, have selected from their number five men in whom they have confidence because of contact month after month. They pick the five men who they feel can best administer the affairs of the Society in between meetings of the Council, and those men, as I have occasion to know when I was President, are men of probity, of honesty, of integrity, and men who can very well handle your funds, better perhaps than they could handle their own.

If you are going to have each Councilor nominate another man to do his thinking for him on the budget, and the Councilor himself is meeting with other Councilors during the year in conference, you are going to spoil, you are going to disburse and are going to dilute the combined knowledge and experience of your Council. We have done much tinkering this year with the Constitution. We should simplify the methods and not complicate them. I hope any change in the present method will not prevail.

Dr. H. Cook (Genesee): In justice to the Chairman of the Council, I would like to make an explanation somewhat of the progress which has taken place in the formation of the Executive Committee of the Council.

I was on the Council six years ago, and there was no one practically, except Dr. Bruce, from the east side of the state. At that time it was necessary and advisable to have a representative from the east side of the state, and after a caucus of the men from the east side of the state it happened to be myself, because the other members didn't care to spend the time to go to the Executive Committee meeting.

A year ago when Dr. Brunk and Dr. Carstens were elected to the Council, it seemed advisable that some man from Wayne County should be elected to the Executive Committee of the Council, and Dr. Carstens was appointed. Dr. Robb, who will be our President next year, is also a member ex-officio of the Executive Committee of the Council.

I have noticed it has been the desire of the Council to distribute and place the men upon the Executive Committee who could best serve and best attend these meetings. I think these men should understand that. There has never been any desire on the part of the Council or officers of the Council to be unfair.

It seems to me this question has been raised considerably from Wayne County. Wayne County has two members upon this Executive Committee at the present time, and they are good members and we value them very highly, and I believe they represent you and are just as interested in one part of the state as in another part of the state.

I don't believe you should misunderstand the work of the Executive Committee and the desire of the Council in the appointment of the Executive Committee. I think you should understand that two mem-

bers automatically become members of it because one is Chairman of the Finance Committee and the other is Chairman of Publications, Vice Chairman and Chairman of the Council, in order to make it represent the whole state as much as possible.

You can readily understand it would be very difficult for a man in the upper peninsula to come to the meetings, which often take place once a month. I think you men should consider those things in your deliberations.

Dr. A. H. Whittaker (Wayne): I would like to draw the attention of the House of Delegates to the fact that two members mentioned as being members of the Executive Committee are not full-fledged members of the Executive Committee and are without vote.

Dr. B. R. Corbus (Grand Rapids): No.

Dr. A. H. Whittaker (Wayne): At any rate, we have heard the other side of the question from members of the Executive Committee, and I would like very much for this House of Delegates to hear from the other members of the Council who are not members of the Executive Committee as to their opinion. I would like to hear from every member of the Council present.

The Speaker: Is there any member of the Council who wishes to answer that? Is there any further discussion, gentlemen?

The Committee reported adversely on these resolutions, and the motion now is to adopt the Committee's report.

The motion was put to a vote, and was carried.

Dr. G. C. Penberthy (Wayne): The Committee accepted the report of the delegates to the American Medical Association. I move its adoption.

The motion was regularly seconded, was put to a vote and carried.

Dr. Penberthy: The Committee also accepts and approves the report of Dr. Marshall on the Medical Survey. I move its adoption.

The motion was supported by several, was put to a vote and carried.

Dr. G. C. Penberthy (Wayne): The Committee also approves and accepts the address of the President-elect. I move its acceptance.

The motion was regularly supported, was put to a vote and carried.

Dr. Penberthy: The Committee also accepts and approves the address of the President. I move its acceptance.

The motion was regularly supported, was put to a vote and carried.

Dr. Penberthy: The Committee also accepts and approves the address of the Speaker of the House. I move its acceptance.

Dr. H. A. Luce (Wayne): I second the motion.

The motion was put to a vote, and was carried.

SPECIAL COMMITTEE

The Speaker: Dr. Luce, I believe I appointed you to a special committee this morning. We will hear your report.

Dr. H. A. Luce (Wayne): Mr. Speaker and Members of the House of Delegates: The

report of the Special Committee, to which was referred the Curtis motion, which was in effect as follows:

Dr. Luce read the motion.

Dr. Luce: I move its adoption.

The motion was regularly supported, was put to a vote and carried.

Dr. H. A. Luce (Wayne): Report of Special Committee to which was referred Delegate Ekelund's resolution in the matter of medical, surgical and hospital care of afflicted children of indigent parents, as provided for in Act 274.

Dr. Luce read the report of the Special Committee concerning this matter.

Dr. Luce: I move the adoption of the Committee's report.

The motion was supported by several, was put to a vote and carried.

Dr. Luce: Report of Special Committee to which was referred the resolution introduced by Delegate Brook with reference to the political indorsements of any candidates by officers, council, or committee of this Society.

Dr. Luce read the report of the Special Committee concerning this matter.

Dr. Luce: I move the adoption of the report of the Committee.

The motion was regularly seconded, was put to a vote and carried.

Dr. Luce read the report of the Special Committee with reference to the resolution concerning indiscriminate distribution of biological products by the department of public health.

Dr. H. A. Luce (Wayne): I so move.

The motion was regularly seconded, was put to a vote and was carried.

Dr. Luce: I move the adoption of the report of the Special Committee as a whole.

The motion was regularly seconded, was put to a vote and was carried.

MISCELLANEOUS BUSINESS

The Speaker: Next we will listen to the report of the Committee on Miscellaneous Business.

Dr. Luce: I will preface this with an explanation. I know you are getting tired, and I know the delegates to the A. M. A. will enjoy the privilege of showing the delegates of the state of Michigan the rare treat we have when we are in the House of Delegates. I therefore move that we resolve ourselves into a Committee of the Whole and that the Secretary of the Michigan State Medical Society act as Chairman during discussion of this business.

The Speaker: You have heard the motion, gentlemen. The motion is that we resolve into a Committee of the Whole.

The motion was regularly seconded, was put to a vote and carried, and the session con-

vened as a Committee of the Whole with Dr. Warnshuis in the chair.

COMMITTEE OF THE WHOLE

The Chairman: The Committee of the Whole will please come to order.

You have been called together to hear the report of the Special Committee of the House of Delegates on Miscellaneous Business, of which Dr. Gorsline is the Chairman. Dr. Gorsline will render his report to this Committee.

Dr. C. S. Gorsline (Calhoun): Mr. Chairman and Gentlemen of the House: I don't know how much you want read of these motions. All of them are short, but after the discussion we have had perhaps you have forgotten all about what went on this morning.

Dr. Gorsline read the resolution beginning with the words, "Whereas, The trend of the times has exercised," and so forth.

Dr. Gorsline: Your Committee reports favorably and recommends the adoption of the resolution.

Dr. Philip Riley (Jackson): If that report is adopted, does the University of Michigan violate that provision in their hospital?

The Chairman: Can the Chairman of the Committee answer the question?

Dr. Gorsline: I don't know.

Dr. L. J. Hirschman (Wayne): Mr. Chairman, I move an amendment to insert the words "and sanatorium" in every place where hospital is mentioned in this report.

The Chairman: Does the Chairman of the Committee wish to accept that amendment?

Dr. C. S. Gorsline (Calhoun): You want to broaden the scope of that?

Dr. Hirschman: I want to broaden the scope.

Dr. Gorsline: I have no means of conferring with the rest of the Committee. If any of the rest of the Committee are present, I would like your expression.

The Chairman: Unless any other member of the Committee offers objection, it will be construed that the words "and sanatorium" are inserted after the word "hospital." Is there any discussion?

Dr. H. A. Luce (Wayne): That motion was not seconded, Mr. Chairman. I understood Delegate Hirschman made that as a motion to amend. It has not been seconded.

The Chairman: He moved it as a suggestion. The Chair asks the Chairman of the Committee if he would entertain the suggestion on behalf of the Committee. Having heard no objection from his Committee, the suggestion is entertained.

The recommendation of the Committee is still before you, that this resolution be adopted. Is there any further discussion?

Dr. G. H. Southwick (Kent): Inasmuch as the Chairman of the Committee has left in that Committee report the words in which this flat rate is not approved by the medical staff of the institution, I believe it entirely nullifies their recommendation, because I happen to be a member of a hospital staff which has partially adopted the flat rate principle, and the Board of Trustees anticipate a wider policy if not stopped at the present time. They can entirely nullify your recommendation simply on the wording there at the present time, due to the fact that you have left in there where this is not approved by the medical staff of the institution.

The Chairman: Is there any further discussion?

The motion was put to a vote, and was carried.

Dr. F. T. Andrews (Kalamazoo): I move that a copy of this report be sent immediately to the hospital convention being held at Detroit.

The Chairman: Dr. Andrews, may I ask you to defer that motion? This body is now sitting as a Committee of the Whole and not as a House of Delegates. After you reconvene as a House of Delegates, I think that motion would be entirely in order and be entertained by the Speaker.

Dr. F. T. Andrews (Kalamazoo): At your suggestion, I withdraw it, sir.

Dr. C. S. Gorsline (Calhoun): Mr. Chairman, Dr. Greene of Shiawassee offers the following resolution:

Dr. Gorsline read the resolution beginning with the words, "Whereas, At the present time it is necessary that all state expenditures," and so forth.

Dr. Gorsline: Your Committee approves this resolution and moves its adoption.

The motion was supported by several, was put to a vote and carried.

Dr. Gorsline read the resolution submitted by Dr. Estabrook beginning with the words, "Whereas, Under the present birth registration law of Michigan," and so forth.

Dr. Gorsline: The Committee approves, and I move the adoption of the resolution.

The motion was supported by several, was put to a vote and carried.

Dr. Gorsline: I would like to ask Dr. Gariepy if these two motions are not practically similar.

Dr. L. J. Gariepy (Wayne): They are very similar, but it is necessary to have two different motions to take care of the two different conditions that arise in the statute books. One is for the indigent and the other is for the insane, epileptic and feeble-minded. In one case you have to have two physicians appointed. In the other case there is one.

Dr. C. S. Gorsline (Calhoun): I will read them both.

Dr. Gorsline read the resolution beginning with the words, "Whereas, Sections 5276-77 of Act 293, Public Acts of 1929, provide that medical," and so forth.

Dr. Gorsline: The Committee recommends the adoption of the resolution.

The motion was supported by several, was put to a vote and carried.

Dr. Gorsline read the resolution beginning with the words, "Whereas, Act 231 of the Public Acts of 1923, Section 1325 of the Compiled Laws of 1915," and so forth.

Dr. Gorsline: The Committee recommends its adoption.

The motion was supported by several, was put to a vote and carried.

Dr. Gorsline: I have saved the best one for the last.

Dr. J. D. Curtis (Wayne): I move, before we go into this thing, that this body resolve itself into executive session.

The motion was regularly supported.

The Chairman: And that the Chairman be authorized to appoint a Sergeant-at-Arms to poll the committee.

The motion was put to a vote, and was carried.

The Chairman: You will recess for two minutes while the Sergeant-at-Arms, Dr. Curry of Flint, and Dr. Garipey of Wayne, poll the House and see that only accredited members or delegates remain in this auditorium.

With the consent of the Committee, it has been customary that officers of the Association, members of the Council and of permanent committees be considered as eligible to attend the executive session; alternates also.

May I have such a motion or amendment? If there are no objections, the Sergeant-at-Arms of the House will so poll the House permitting these officers, alternates and members of the committees to remain.

Dr. H. A. Luce (Wayne): I offer an amendment that the secretaries of the societies be included.

The Chairman: And the secretaries of county societies.

Dr. Reeder will also be Assistant Sergeant-at-Arms.

Recess.

The Chairman: The Committee will please come to order. Will the Sergeant-at-Arms please report to the House how the committee was polled? Dr. Garipey, is the Committee properly polled?

Dr. L. J. Garipey (Wayne): I have polled this side of the house.

Dr. Frank Reeder (Genesee): I find all those I have examined are glad to remain.

The Chairman: This Committee is now in executive session and you will consider the resolution that is to be referred to you by the House of Delegates' Committee on Miscellaneous Business. *Dr. Gorsline*, the Chairman, has the floor.

Dr. J. D. Brook (Kent): Mr. Chairman, in the resolution I presented one of the delegates from Kent has made some remarks in which he desires to have a portion of this resolution deleted. To accomplish this purpose, I move the reconsideration of the adoption of this resolution.

Dr. C. S. Gorsline (Calhoun): What is the purpose of the deletion?

Dr. Brook: To make the resolution a little stronger.

The Chairman: The question is upon reconsideration of the resolution presented by Dr. Brook. Do I hear support?

Dr. A. V. Wenger (Kent): I support it.

The motion was put to a vote, and was carried.

The Chairman: The resolution is now before you in its original form.

Dr. J. D. Brook (Kent): Mr. Chairman, I move the adoption of this resolution with the following deletion in the paragraph next to the last, "in which the doctor has no voice in determining the fee he shall receive."

I move the adoption of the resolution with that deletion.

Dr. C. S. Gorsline (Calhoun): I wish to ask if that meets with the approval of the other members of my Committee? Is there any objection?

Dr. Stanley Insley (Wayne): I hold no brief for or against this particular amendment. I do hold a brief, however, for the Medical Society as a whole, and I don't like to be drawn into a controversial issue.

Dr. J. D. Curtis (Wayne): Point of order. He is discussing another resolution that hasn't been brought up yet.

Dr. Gorsline: This is the resolution I read first of all, offered by Dr. Brook.

The Chairman: It is relative to hospitals appointing staffs and hospitals engaging in contract practice and members of the staff not having voice in the determination of the policies of that practice or the fees they are to get. That is the context of the resolution.

Is there any further discussion?

The motion to adopt the resolution as amended was put to a vote, and was carried.

Dr. C. S. Gorsline (Calhoun): This matter that we have gone into executive session on is the matter of birth control. There is no action contemplated, so far as this Committee can observe, except that facts be obtained and those facts be made the subject of the Committee's report at the next meeting of the

House of Delegates. The Committee feels there is no harm in obtaining facts on any subject that is of interest to this House of Delegates. I will read the resolution with that in view.

Dr. Gorsline read the resolution beginning with the words, "Whereas, Wide publicity, public information," and so forth.

Dr. Gorsline: With the preliminary remarks I made, the Committee moves the adoption of this resolution.

The motion was supported by several.

The Chairman: The question is now before you and is confined to the one subject: Do you want a committee or do you not want a committee?

Is there any discussion?

Dr. Stanley Insley (Wayne): I notice the bottom of this resolution calls for further action.

Dr. C. S. Gorsline (Calhoun): I beg your pardon, Doctor. There is a little portion I inadvertently omitted.

Dr. Gorsline read the portion beginning with the words, "Be it further resolved that pending," and so forth.

Dr. Stanley Insley (Wayne): As I mentioned just a moment or so ago by not starting a controversial issue, and at the same time recognizing that in the report of the Committee they are simply attempting to ascertain facts, it has occurred to me that possibly the simply going on and studying this affair might in a way either give sanction to any organization or might, in a sense, be antagonistic to the beliefs of other organizations. I wonder if a slight change of wording in there would satisfy the sponsors of this movement so that would probably quiet any controversial questions that might arise either now or later.

I would like to offer the suggestion that two or three words be changed in there.

In the second paragraph, which reads, "Whereas, The question is of medical, moral and social interest and concern," I would like to ask permission to amend that to say, "question is of medical, moral and social economic interest."

In the fourth paragraph I would like to amend it slightly again. It reads now: "Whereas, Birth control policies, advice and application partly rests with the profession of medicine and should be controlled and directed by recognized medical organizations," and so forth.

I would like to make a motion that it read, "advice and application partly rests with the profession of medicine and should be studied by recognized medical organizations."

At the bottom, to further safeguard this motion and to stop any controversy possible, "And be it further resolved that nothing in

this study shall be construed as sanctioning or disapproving of any organization, previous study of facts, or opinions."

I submit those modifications as an amendment.

The Chairman: Does the Committee wish to accept Dr. Insley's modifications and amendments to the original resolution?

Dr. C. S. Gorsline (Calhoun): Is there any objection on the part of any of the rest of my Committee? Do any of the other gentlemen wish to offer any suggestions? It is acceptable to me, Mr. Chairman.

Dr. E. D. Spalding (Wayne): I do not quite see why, in the deliberation of a scientific question, the moral issue should be injected and the scientific issue should be withdrawn.

Dr. Stanley Insley (Wayne): Your point is well taken, Dr. Spalding. The motion states we are going out after whatever facts may be found. I am only attempting to guard any statement which might be made at this present time to prevent it being construed as being antagonistic or at variance with any beliefs of other organizations. I have no intention of mixing any moral, social or medical facts.

The Chairman: Is there any further discussion? The question first is upon the acceptance of the amendments and alterations offered by Dr. Insley.

The motion on the amendments was put to a vote and carried.

The Chairman: The question now is upon the adoption of the Committee's report. Is there any discussion upon that question?

The motion to adopt the report of the Committee was put to a vote and was carried.

Dr. H. A. Luce (Wayne): I move we rise from executive session.

The motion was regularly supported, was put to a vote and carried.

The Chairman: You are now out of executive session.

Dr. L. J. Hirschman (Wayne): I move we rise from the Committee of the Whole, and that the Committee Chairman report to the House.

The motion was regularly seconded, was put to a vote and carried.

The Chairman: The Committee is adjourned.

The Speaker resumed the chair.

The Chairman: As Chairman of the Committee of the Whole, I beg leave to report that the Committee convened and considered the various subjects and resolutions that had been assigned to your Committee on Miscellaneous Business, and with the few alterations which are contained in the text of each resolution they have adopted these and so recommend to

the House of Delegates that these resolutions and reports be adopted.

I move the adoption of the report of the Committee of the Whole.

Dr. J. D. Brook (Kent): I support the motion.

The Speaker: You have heard the motion. Is there any discussion?

The motion was put to a vote, and was carried.

The Speaker: Is there any unfinished business?

UNFINISHED BUSINESS

The Secretary: Mr. Speaker, there lies over an amendment to the Constitution tendered by the Council at our last annual meeting which you will find on Page 9 of the handbook.

The Secretary read the amendment to the Constitution.

The Secretary: This amendment, Mr. Speaker, is now before the House.

Dr. A. P. Biddle (Wayne): I would like to ask the Speaker of the House, does that automatically exclude membership in the American Medical Association?

The Speaker: It says, "Members Emeritus shall hold all the privileges of membership, including the JOURNAL." The Chair would infer that membership in this Society carries with it membership in the National Association.

Dr. W. J. Stapleton (Wayne): I make a motion that it be adopted.

The motion was regularly supported.

The Speaker: Is there any discussion?

The motion was put to a vote, and was carried.

The Speaker: Is there any other new business?

Dr. K. B. Brucker (Ingham): Some time ago a resolution was passed in which the State Board of Health was condemned for the indiscriminate distribution of biological products. At that time, I think statement was made in the resolution or by some discussant that some thirty-odd products were made, and that that should be limited to the products which were to be used as an emergency proposition, some fifteen or sixteen.

I am sure the State Board of Health has no desire to indiscriminately peddle biological products around the state that the doctors do not want, and I think it is only fair that a bill of particulars as to which fifteen or sixteen products are approved should be given. I do not feel that the State Board of Health at the present time feels they are in the indiscriminate peddling of biological products. If the Medical Society desires that to be curtailed, I think it is only fair that the Board should know which ones should be eliminated.

Dr. H. A. Luce (Wayne): Mr. Speaker, may I be allowed to answer that question?

I have corresponded with State Health Officer Slemmons and explained to him that the idea of the resolution was that we have no objection to the distribution of biological products, such as antitoxin, smallpox vaccine, antirachitic serum, antitetanic serum, or anything of that type.

The Speaker: Is there any further discussion? Is there any other new business, gentlemen?

Dr. F. W. Garber (Muskegon): It has become evident to some of us this afternoon that a lot of these resolutions that have come before us have come rather suddenly. We haven't had time to give them the consideration which it seems to me is most necessary. An amendment to the Constitution has to go over until next year. Many of these amendments to the By-laws are just as important, or at least only less important than amendments to the Constitution. There are other matters that require more study than we are able to give in the short time we have before us.

It has seemed to me that the men who intend to offer the resolutions know something about that before the JOURNAL next to this meeting is published, and I would make a motion to the effect that those expecting to offer resolutions at any regular meeting of the State Society present those resolutions, through the JOURNAL of the Society, in the nearest publication preceding the meeting, if I make myself clear.

The Speaker: The Chair feels that is a good suggestion.

Dr. H. A. Luce (Wayne): I support the motion.

Dr. E. C. Baumgarten (Wayne): I believe there was something to that effect in the address of one of our officers this morning. I have forgotten just the length of time specified, but I believe it was ten days, and that report was accepted as such.

Dr. A. P. Biddle (Wayne): Dr. Warnshuis will probably recall that some two or three years ago I made that same request, and after it was made the Secretary endorsed it. So I think that is proper and I should like to endorse the motion.

Dr. F. W. Garber (Muskegon): I would like to explain that this does not include any resolution that spontaneously comes to the mind of any delegate during the course of the meeting which he considers necessary or desirable to present, but so many of these resolutions are known at least thirty days before they are presented, and it seems to me that would be a good idea.

The Speaker: Are you ready for the question?

The motion was put to a vote, and was carried.

The Speaker: Is there any other new business?

Dr. A. H. Whittaker (Wayne): This is a petition for a meeting of the House of Delegates.

Because of the importance of the report of the Committee to Study the Medical and Health Agencies in Michigan, and as the report will be ready in January, 1933; be it

RESOLVED, That a special meeting of the House of Delegates be held in Lansing during the first week in February, 1933, the exact date to be determined by the President of the Michigan State Medical Society.

This petition is accompanied by the proper number of signatures.

The Speaker: This petition calling for special meeting will be referred to the Council.

Dr. Andrews, didn't you have some motion to present after we got out of the executive session?

Dr. F. T. Andrews (Kalamazoo): The motion was that a copy of the resolution which had to do with the hospitals be forwarded immediately to the hospital convention being held at Detroit this week.

Dr. L. J. Gariepy (Wayne): I support that motion.

Dr. R. H. Denham (Kent): This is a national hospital association meeting in Detroit, is it not? Do we care to inflict our state affairs upon the American Hospital Association? We would rather have it go, as the resolution suggested, to each hospital in the state.

Dr. F. T. Andrews (Kalamazoo): Personally, I don't think it makes a bit of difference. I think, if you take the attitude in the state of Michigan that we are against these things, we may start something in some of the other states.

The Speaker: The Chair doesn't wish to be dictatorial, but I feel this so keenly and I think it would be well to send it there today. They get letters and telegrams, and it might start something.

The motion was put to a vote, and was carried.

The Speaker: Is there any other new business?

What is your pleasure? The program calls for a third session at seven forty-five. Do you want it changed to seven-fifteen?

Dr. J. D. Brook (Kent): I move we recess until seven o'clock.

Dr. L. J. Gariepy (Wayne): I support the motion.

The motion was regularly carried, and the meeting recessed at four fifty-five o'clock.

Tuesday Evening Session

September 13, 1932

The final session of the House of Delegates was called to order at seven-fifteen o'clock, the Speaker presiding.

The Speaker: Gentlemen, please be seated and come to order.

Dr. McNabb, are you ready to report for the Committee on Credentials?

Dr. A. A. McNabb (Kalamazoo): Mr. Speaker, there have been seventy-one credentials turned in to the Credentials Committee today.

I move the adoption of this report.

The motion was regularly seconded, was put to a vote and carried.

The Speaker: The roll call, Mr. Secretary.

The Secretary: Mr. Speaker and Members of the House: I hold in my hand the signed roll call of more than a quorum, and I would suggest that some member of the House make a motion that this be constituted the roll call of this evening's session.

Dr. F. T. Andrews (Kalamazoo): I will make such a motion.

The motion was regularly seconded, was put to a vote and carried.

The Speaker: Is there any business to come before the House?

Dr. A. P. Biddle (Wayne): May I ask for an interpretation? I understand that in order to act on the change electing the delegates in August, that must be given immediate effect. If that is true, then we cannot act upon the proposed method for the election of delegates without having it given immediate effect. I would like to have an interpretation of that.

The Speaker: The amendment that was made to the By-laws was made in due form, and under parliamentary procedure an amendment enacted in annual session does not take place until the session adjourns. In order to make it apply for this evening's session, or for your deliberations this evening, it is necessary that somebody move that that amendment be given immediate effect.

Dr. A. P. Biddle (Wayne): In view of that, I move that the amendment be given immediate effect.

The motion was regularly supported.

The Speaker: You have heard the motion that the amendment concerning the method of electing alternates to the American Medical Association be given immediate effect.

Is there any discussion?

Dr. L. J. Hirschman (Wayne): As I understand it, the amendment as passed this afternoon provides for electing those of the five delegates whose terms expire tonight, and the five alternates tonight at this time.

The Speaker: The Chair is of the opinion it is only for the alternates.

Dr. L. J. Hirschman (Wayne): Five alternates? Will the Secretary please have the resolution read?

The Speaker: Maybe there is someone who is sure of his ground as to what the resolution was.

Dr. C. E. Dutchess (Wayne): On that particular point, I can tell him that the amend-

ment provides for a number of alternates equal to the number of delegates.

Dr. Hirschman: That means five delegates in that case.

Dr. A. P. Biddle (Wayne): In view of what Dr. Hirschman says, that would not apply in 1933. Does that in any way affect the vote tonight?

Dr. Hirschman: That is what I want to find out also.

Dr. Biddle: Don't we still vote on three.

The Speaker: Unless the motion is made to give the By-laws immediate effect.

Dr. J. D. Curtis (Wayne): It has been so moved.

The Secretary: If you will turn to Page 4 of your program, which is an exact copy of the official records of the Society as published each month in the JOURNAL, you will find that the terms of Dr. Carl F. Moll and Dr. Henry E. Perry, who were elected last year, do not expire until 1933. The terms of Dr. R. H. Denham and Dr. Philip Riley expire this year.

In your order of business this evening, Dr. Moll's name is mentioned as being an alternate whose term expires. That is a typographical error. In consequence with the immediate effect of the resolution and the amendment you adopted this afternoon, it now devolves upon the House to elect three alternate delegates tonight.

Dr. L. J. Hirschman (Wayne): Thank you, Mr. Secretary.

Mr. Speaker, the resolution as adopted this afternoon is in conflict with the Constitution and By-laws of the American Medical Association, and it is a good time to clarify it before we adjourn.

Under "By-laws—Business and Legislation," of the American Medical Association, it states: "Apportionment of delegates. At the annual session of 1925 and every third year thereafter the House of Delegates will appoint a committee of five on re-apportionment, on which the Speaker and Secretary shall be mentioned. The committee shall apportion the delegates among the constituent associations in accordance with Article V, Section 3, of the Constitution, in proportion of the membership as recorded in the office of the Secretary of the American Medical Association on April 1 of the year in which the apportionment was made. This apportionment shall take effect at the next annual session and shall prevail until the next triennial apportionment is increased or decreased.

"Term. Delegates and alternates from constituent associations will be elected for two years. Constituent associations entitled to more than one representative shall elect them so that, as near as may be, they shall be elected each year." Delegates and alternates

elected by sections, and so forth, shall hold office for two years.

If we elect three alternates tonight, we are in accord with this resolution, but in the future the resolution provides for five delegates to be elected at one time and we are in conflict with the Constitution and By-laws of the American Medical Association. I want to bring that point up now so it can be clarified.

Dr. B. L. Connelly (Wayne): Dr. Hirschman says five delegates. The amendment says nothing about delegates, but alternate delegates.

Dr. Hirschman: The same thing applies to both. If the resolution provides for five alternates we are in conflict. We should provide for three or four, whichever is nearest half, each year as the A. M. A. provides. In other words, we have to change that resolution. It has to comply with the parent organization. We can't elect five alternates at any one meeting.

The Secretary: Mr. Speaker, I have found the resolution, and probably the matter may be clarified very readily if somebody will first move reconsideration of the amendment and then alter the words "one year" to "two years." The resolution reads, "Alternate delegates shall hold office for one year." Make it read, "Alternate delegates shall hold office for two years." That will clarify the resolution.

Dr. H. A. Luce (Wayne): I voted in the affirmative, and move a reconsideration of the resolution with reference to the election of alternate delegates.

Dr. J. D. Curtis (Wayne): I support the motion.

The Speaker: Motion has been made and supported that we reconsider the resolution having to do with the election of alternate delegates.

The motion was put to a vote, and was carried.

Dr. Curtis: I move that the words "one year" be stricken out, and the words "two years" be substituted therefor.

Dr. L. J. Hirschman (Wayne): Something should be said there about one-half or nearly that portion elected on each alternate year, and that will clarify it.

Dr. Curtis: It isn't necessary because the A. M. A. takes care of that. They have been elected last year, and they are being elected this year. There can't be any way out.

The motion to change the wording of the resolution was regularly seconded, was put to a vote and carried.

The Speaker: Is there any other business?

Dr. F. T. Andrews (Kalamazoo): In the course of the last few minutes it has come to

my attention that the motion I made this afternoon regarding the hospital amendment is apt to throw a boomerang and reflect upon us in a way which we don't want at this time, and I would like to open this for reconsideration and ask that Dr. Robb explain just what he meant.

Dr. J. D. Curtis (Wayne): I support the motion.

Dr. J. M. Robb (Wayne): I spoke to Dr. Andrews this afternoon about this situation. I was in conference with the executives of the American Hospital Association before I came here this week, and there is one thing they are doing for us in conjunction with the lay people that represent the hospitals. They are trying to successfully and satisfactorily handle the Veterans hospital situation. At the present time in particular, I think if we do something that might disturb their feeling toward this problem (and I feel Dr. Shirley and all these people are making a terrific effort to do something for the profession), we might antagonize them in the long run and not get the satisfaction we are looking for. That is why I spoke to Dr. Andrews and asked him, at the present time at least, to reconsider the proposition of sending a letter to the American Hospital Association.

Dr. A. P. Biddle (Wayne): It would be given to the press at any rate.

Dr. J. M. Robb (Wayne): No, not yet. It is just a matter that I felt, at the present time in order to help us out, would be just as well not to have done.

Dr. K. B. Brucker (Ingham): Conforming to this suggestion—we don't want to get in wrong at all—I move this resolution be laid upon the table, to be taken up at the special meeting in February.

The Speaker: Dr. Brucker, the Chair feels you must reconsider this motion first, and the Chair will entertain a motion to reconsider.

Dr. Brucker: I make a motion to reconsider.

Dr. F. T. Andrews (Kalamazoo): I support it.

The Speaker: Motion has been made and supported to reconsider the motion of Dr. Andrews this afternoon relative to sending this message to the American Hospital Association. Is there any discussion?

The motion to reconsider was put to a vote and was carried.

Dr. R. H. Denham (Kent): I move that this motion under reconsideration be laid upon the table.

Dr. J. D. Curtis (Wayne): I support that motion.

The Speaker: That will not take care of the matter. Motion was passed this afternoon to send it. We are reconsidering that motion,

whether or not we are going to send it. Now it is in order for someone to make a motion not to send it.

Dr. Denham: Mr. Speaker, the consideration of this motion is now before the House. If it is laid upon the table, that disposes of it, it seems to me.

Dr. K. B. Brucker (Ingham): I move that the resolution to send this communication to the American Hospital Association be laid on the table until the February special meeting. That does not take it out of sight at all. It will automatically come up in front of us. At that time, we can do something with it, or kill it.

Dr. C. E. Dutchess (Wayne): Gentlemen, I apologize for stepping in his shoes, which I can't fill.

I have just been talking to the press representatives, and they tell me that has not yet gone out. I am sure they will be in accord with us if we request them not to send it out.

The Speaker: The Chair will call for a vote on the motion made by Dr. Denham of Kent and Dr. Brucker of Ingham that the motion be tabled.

The motion was put to a vote, and was carried.

Dr. I. W. Greene (Shiawassee): It seems to me this matter of electing alternate delegates to the A. M. A. is still a little confused. If we elect two delegates this year and three next year, where is our seniority coming in, if any? Supposing we elect two this year, and one has thirty-six votes and the other thirty-four, and next year we elect three and one has twenty-three, one twenty-two and one nineteen votes. It seems to me there isn't much point as far as the seniority is concerned if elected at different times, as they have to be.

The Speaker: Make a motion, Dr. Greene, if you wish.

Dr. A. P. Biddle (Wayne): I would like to have one more point clarified. As the doctor suggested, those who are elected this year will not have priority over those who are now in office. Am I not right? You have always told me the senior member was selected by the Executive Committee to take your place. Does that seniority refer to those at present in office?

The Secretary: Dr. Moll and Dr. Perry will be the senior alternates. Which one of the two will be the senior of the other, I am not prepared to say.

Dr. I. W. Greene (Shiawassee): Why not have somebody tell how that is going to stand? How about the men elected next year? Supposing one gets more votes than the man this year.

The Speaker: I don't believe we can make any rule retroactive.

Dr. R. H. Denham (Kent): I move that that man be considered senior who has served longest and who had, at the time of his election, the greatest number of votes.

Dr. B. L. Connelly (Wayne): All this is out of order.

The Speaker: Dr. Denham has a right to make the motion. There seems to be a jam we are liable to get into and won't get out of easily.

Dr. Connelly: If you will carefully go over that amendment as it has been worked out, you will find all your questions are answered. There seems to be some attempt at conflict here tonight. The provision originally was to elect all of the alternate delegates each year. That would take care of your seniority. You can elect all of your delegates. You can elect the three for a year, and next year you can elect them for a period of two years. I am going to ask for reconsideration of my original motion so that we can bring this thing before the House again.

Dr. L. J. Hirschman (Wayne): I second that motion.

The Speaker: Dr. Denham, do you want to withdraw your motion?

Dr. R. H. Denham (Kent): I will withdraw my motion in order to clarify matters.

The Speaker: It has been moved and seconded to reconsider the motion having to do with the election of alternates. Is there any discussion?

Dr. Hirschman: I think we have acted like a lot of school children here today. We have made more darned fool motions and tinkered more with our Constitution and tinkered more with the good and efficient way of running this Society, and I am ashamed of some of my fellow members the way they have done things. They have absolutely tried to uproot the very wonderful scheme of organization of this Society.

Now this thing is up for reconsideration. It is balled up, and nobody knows what it is all about. They have a very complicated way of declaring seniority, and while it is up for reconsideration I think it is a good time to kill it and go ahead, and wipe out some of the things we have done this afternoon.

The Speaker: Gentlemen, there is a motion before the assembly to reconsider.

The motion was put to a vote, and was carried.

Dr. A. P. Biddle (Wayne): You can't have a motion to reconsider without unanimous vote, can you?

The Speaker: Yes, you can. There will never be unanimous vote in this assembly, Dr. Biddle.

Dr. L. J. Hirschman (Wayne): I ask, Mr.

Speaker, if the motion is now before the House in its original form.

The Speaker: Yes, we are reconsidering the motion in its original form.

Dr. Hirschman: It hope the motion will be defeated.

Dr. J. D. Curtis (Wayne): May I ask that the motion be re-read.

The Speaker: What is the wish of the assembly? Do you want the motion re-read? (Cries of "No.")

We will not re-read the motion.

Dr. A. V. Wenger (Kent): I make a motion that the motion be rejected.

Dr. G. H. Southwick (Kent): I second the motion.

The Speaker: Moved by Dr. Wenger of Kent that the motion be rejected. Is there any discussion?

Dr. Stanley Insley (Wayne): Point of order. If a motion is voted upon and decided at one meeting, can reconsideration of that motion be taken up at the same meeting? Usually, I understand it has to be taken up the following meeting.

The Speaker: There is a fine point in Robert's Rules of Order, and I think it would be according to Robert's Rules of Order to reconsider that this evening.

Dr. Insley: I abide by your ruling. The only question I would like to have answered in my own mind is this: I don't think anybody has any particular argument against five alternates for five regular delegates to the A. M. A. convention. I don't think anyone has any quarrel with that particularly. The quarrel, as I see it, revolves around the way of electing these five alternates and the method of choosing the seniority. I think most of us are agreed that the five alternates are perfectly all right and probably desirable.

I wonder if some arrangement cannot be arrived at satisfactory to everybody concerned to settle the question of seniority. I think that is what most of this argument is centering around. I think most of the men are agreed that five alternates for five delegates is perfectly all right.

Before this is put to a test vote, I would like to ask Dr. Hirschman possibly, or any other man, to put a motion in such form that it would take care of the seniority ruling and the method of choosing. I wouldn't like to see it killed right offhand.

Dr. R. H. Denham (Kent): There has never been much question, I believe, of seniority. There was apparently an unfortunate error on the part of the Council in selecting recently a man among the alternates who was not a senior alternate, and I think probably that is why this discussion has come up. After this discussion, I doubt if that error is again

made, and I believe the Council and the Secretary will be able to decide easily who the senior alternate is.

Dr. George Curry (Genesee): I would like to make a motion that the original motion be tabled.

Dr. I. W. Greene (Shiawassee): I will second that motion.

The Speaker: A motion to table is in order, gentlemen.

The motion to table was put to a vote, and was carried.

Dr. B. L. Connelly (Wayne): I appeal the decision of the Chair.

The Speaker: The Chair rules that this motion had carried, and appeal has been made from the decision of the Chair. The question now is, shall the decision of the Chair be sustained.

Vote was taken, and the decision of the Chair was sustained.

Dr. B. L. Connelly (Wayne): I call for a rising vote.

The Speaker: Dr. Connelly calls for a rising vote.

All in favor of the motion arise. (Forty-three.)

Those opposed arise. (Two.)

The decision of the Chair is sustained.

Is there any further business? If there is no further business, the Chair will entertain nominations for the office of President-elect.

ELECTIONS

Dr. L. J. Hirschman (Wayne): Mr. Speaker, at this time I get on my feet for a very pleasant duty, and that is to honor a man who has served his profession, his state, and his city for many years. But when we honor a man we make him work, and work harder than ever, because the office of President of this Society is no sinecure. It is a man's job, and I found it out since the very excellent man who preceded me to this position.

This man, as has been said, has been in civic life. He has been a commissioner of the city. He has been on many, many city boards. He has served on state boards. He has been a hard worker in a branch of our Society as Councilor, and as a member of the Finance Committee. I was going to say he is a banker, but that is a bad thing to say about a man. He happens to be a conscientious banker, a man who has a grasp of business and public affairs, as well as professional affairs.

I take great pleasure in presenting to you Dr. LeFevre of Muskegon.

Dr. F. W. Garber (Muskegon): It gives me great pleasure, after forty-five years of close association with this man, to second his nomination, and in seconding that nomination I voice the sentiment of every member of the Muskegon County Medical Association.

The Speaker: Are there any further nominations, gentlemen? If there are no further nominations, the Chair will entertain a motion.

Dr. Philip Riley (Jackson): I move that nominations be closed, and the ballot cast for Dr. LeFevre.

The Speaker: Gentlemen, you have heard the motion that nominations be closed and the ballot be

cast for Dr. LeFevre of Muskegon for President-elect of the Society.

The motion was regularly seconded, was put to a vote and carried.

The Secretary: Mr. Speaker, your Secretary does so cast.

The Speaker: I declare Dr. LeFevre unanimously elected as President-elect of our Society.

Dr. Stone, will you escort Dr. LeFevre to the platform?

Next in order is the election of delegates to the A. M. A., the term expiring of Dr. G. S. Gorsline.

Dr. F. T. Andrews (Kalamazoo): Mr. Speaker, I wish to place in nomination the name of a man who is capable, who has given his best for a period of eight long years.

The audience arose and applauded as President-elect LeFevre came to the platform.

The Speaker: Dr. Andrews, will you yield the floor to Dr. LeFevre for a moment?

President-elect LeFevre: Mr. Speaker, Members of the Michigan State Medical Society, Members of the Council, and Doctors: It is certainly a great pleasure for me to be here before you tonight and knowing that you have placed confidence in me in electing me your President-elect.

I hope the work I will do in the next two years will be satisfactory. We have probably the hardest time before us that we have ever had. That means a lot of dissension in the ranks which will be hard to overcome, but if we all stop and think that some of these men who are a little older than I am have been through these things four or five times in their lives, you will recall they have always come out of them all right. I know we will come out right this time, but it means that every one of us has to be on his toes and do everything that is possible for the benefit of the people, the benefit of the state, the benefit of the Medical Society and yourselves.

I hope you will all bear with me in all the things we will have to overcome during these times. I want to thank you all for this honor.

Dr. F. T. Andrews (Kalamazoo): As I said, this man has served eight long years in the House of delegates. He has given unstintingly of his time. He has put Michigan on the map in one of the most enviable manners that one could ask for.

I wish to nominate Dr. C. S. Gorsline of Battle Creek. Send him back, boys, and let him continue the good work.

Dr. ———? (Kalamazoo): I wish to second the nomination of Dr. Gorsline. He has served this body for a number of years in various capacities. He has been delegate to the A. M. A. for eight consecutive years, and I think we will go a long, long way before we can find anyone to fill his shoes.

Dr. K. B. Brucker (Ingham): I wish to place in nomination the name of a man from the Second District. The Second District hasn't been in the habit of asking for very much lately. We have a man there who has been an alternate for a couple of years and whose term is expiring.

I think Philip Riley of Jackson will make a mighty fine delegate for this Society to the A. M. A. convention. I won't say that Phil is entitled to it. I will say that I think, perhaps in my ignorance, that a good deal of this discussion about seniority of alternates, and so forth, has perhaps had something to do with the fact that Phil was not a delegate last year. However, that is not a sour grapes proposition at all. I propose Phil Riley's name because I feel the Second District would like to have him as a delegate and I am sure the Society will be proud of him to represent us at the A. M. A.

Dr. Stanley Insley (Wayne): I would like to

second the nomination of Phil Riley. I think everybody who has been associated with him will realize he is a fighter. Everybody who has been associated with him in any of his dealings, any of his work in the Michigan State Society, knows he is capable. Aside from that, I think we all realize he is a likely man. I would like to urge the nomination and the election of Phil Riley.

The Speaker: Are there any further nominations, gentlemen? If not, the Chair will declare nominations closed and proceed to the election.

The Chair will appoint as Tellers:

Dr. W. A. Hyland, Kent

Dr. Van Leuven, Petoskey.

Dr. John Sundwall, Washtenaw.

Dr. Van Leuven: I am not a delegate.

The Speaker: Dr. Curtis, will you get on this Teller's Committee, please.

The delegates cast their ballots.

The Speaker: Have all the delegates voted who wish to? The Chair declares the ballot closed.

We will now listen to the report of the Tellers.

Dr. W. A. Hyland (Kent): Dr. Gorsline has 42 votes, and Dr. Riley, 28.

The Speaker: The Chair declares Dr. Gorsline elected as a delegate to the A. M. A.

Next in order are nominations for a delegate to the A. M. A. to fill the expired term of H. A. Luce.

Dr. A. P. Biddle: Mr. Speaker, at the request of the County of Wayne, it is my own great pleasure and desire to place in nomination to succeed himself, Henry A. Luce of Wayne.

The Speaker: Are there further nominations, gentlemen?

Dr. J. D. Curtis (Wayne): I move the nominations be closed.

Dr. Biddle: I would ask, then, Mr. Speaker, that the Secretary be empowered to cast the vote of the House of Delegates for H. A. Luce as a delegate of this Association to the A. M. A. to succeed himself.

The motion was supported by several.

The Speaker: You have heard the motion that the Secretary be empowered to cast the ballot for Dr. Luce as delegate to the A. M. A.

The motion was put to a vote, and was carried.

The Secretary: Mr. Speaker, your Secretary does so cast.

The Speaker: I declare Dr. Luce elected.

Next in order are nominations for delegate to the A. M. A. to fill the expired term of Dr. J. D. Brook.

Dr. George Curry (Genesee): The excellency of Dr. Brook's past record in the State Society and as delegate to the American Medical Association certainly warrants his renomination, and I hereby take great pleasure in renominating Dr. J. D. Brook of Kent to succeed himself.

The Speaker: Are there any further nominations?

Dr. J. D. Curtis (Wayne): I move that nominations be closed.

The motion was regularly seconded, was put to a vote and carried.

Dr. Curry: I move the Secretary cast the ballot of the House for Dr. J. D. Brook as delegate to the A. M. A.

The motion was regularly seconded, was put to a vote and carried.

The Secretary: Mr. Speaker, your Secretary does so cast.

The Speaker: The Chair declares Dr. J. D. Brook elected as delegate to the A. M. A.

Next in order are nominations for alternate delegates to the A. M. A., first of all for the expired term of Dr. C. F. Moll.

The Secretary: Dr. Moll's term does not expire until next year. That is a typographical error. Dr.

Denham is next, and there are two others to be nominated.

The Speaker: There are three whose terms expire.

The Secretary: Dr. Perry's and Dr. Moll's terms do not expire. Dr. Denham's is the only term that expires. I beg your pardon, Dr. Denham's and Dr. Riley's.

The Speaker: Alternates whose terms expire are Drs. Denham and Riley. We will now receive nominations for the expired term of Dr. Denham.

Dr. J. J. O'Meara (Jackson): I would like to place in nomination a man who did a lot for the southwestern part of the state of Michigan, a man who made a success of the State Medical meeting two years ago in South Haven and Benton Harbor. I would like to place in nomination the name of W. C. Ellet of Benton Harbor.

Dr. A. P. Biddle (Wayne): May I ask if it would not be possible to nominate all these three on one ballot.

The Speaker: I think doing it singly would be the better way, Dr. Biddle.

Dr. Biddle: It would save us time to write in the three names.

The Speaker: What is the wish of the assembly, gentlemen?

Dr. Ellet has been placed in nomination as alternate delegate to the A. M. A.

Dr. A. L. Callery (St. Clair): I think a man requires a great deal of courage who will allow his name to be put in nomination tonight after all the discussion about the alternates.

I have in mind a man who has the courage to present himself to the Michigan State Medical Society as candidate for alternate to the American Medical Association. He is a man who has been in attendance at our meetings probably the last twenty-five years, during which time he has missed about four or five meetings. He has been a very modest gentleman. He is very retiring in his disposition. We who know him know he is one of the men who stands for the highest ideals in medicine. He will represent the Society well at the American Medical Association. We of the Seventh District love him because we know him, and I have much pleasure in presenting the name of Dr. T. E. DeGurse of Marine City.

Dr. J. L. Chester (Wayne): It gives me great pleasure to support the nomination of Dr. DeGurse. I have known him for a third of a century. I know well of his work in the secretaries' conference. I think if all the delegates here knew him as well as I do he would be elected unanimously.

The Speaker: Are there any further nominations?

Dr. W. A. Hyland (Kent): I would like to place in nomination the name of Dr. R. H. Denham of Grand Rapids.

Dr. G. H. Southwick (Kent): I second his nomination.

The Speaker: Are there any further nominations? If not, the Chair will declare nominations closed, and we will have the same Tellers again, please.

So you will be clear on the subject, the Chair stated we would elect each delegate singly, and I put the question this way: We are now to receive nominations to fill the expired term of Dr. Denham, and that is what we are voting on now.

The delegates cast their ballots.

The Speaker: Has everyone voted who wished to? I now declare the ballot closed.

We will now receive the report of the Tellers.

Dr. W. A. Hyland (Kent): Mr. Speaker, Dr. DeGurse received 29 votes; Dr. Denham received 21; Dr. Ellet received 18 votes.

The Speaker: I declare Dr. DeGurse elected.

The Secretary: He hasn't a majority vote.

The Speaker: What is the rule, Mr. Secretary?

The Secretary: A majority of votes cast. Robert's Rules of Order state that when there are two or more candidates and one candidate does not receive a majority vote, there is no election.

Delegate: Inasmuch as there are three places to fill, couldn't we suspend the By-laws and declare all three of these men elected?

The Speaker: The Chair ruled that we would elect these singly, and this is for Dr. Denham's expired term.

Dr. A. P. Biddle (Wayne): I still contend that where there are three or more candidates, the candidate receiving the plurality vote is elected.

Dr. J. D. Brook (Kent): I believe we are still working under the old system. If so, these gentlemen were nominated to fill the vacancy caused by the expiration of the term of one of the alternates. If so, these three were all candidates. Therefore, it necessarily follows that a majority vote must issue before another is nominated.

The Speaker: The Chair has to decide that there has been no election, and we will proceed to ballot again.

Dr. J. D. Brook (Kent): May I suggest to this House of Delegates that we follow in this instance the rule as used in the American Medical Association's House of Delegates, which is that if there are more than two candidates and there is no majority on the first ballot, the low man drops out and the succeeding ballot is between the two high candidates. I move we adopt that rule. I have nothing against Dr. Ellet; not a thing at all. I would be glad to see him elected as alternate, but simply to expedite matters.

Dr. L. O. Geib (Wayne): I second the motion.

The Speaker: The Chair wishes to follow the wishes of the assembly, but I believe it would expedite matters if this rule were followed. If there is no objection, we will follow the rule that the low man drop out, and vote on the next two.

The motion was carried.

The Speaker: We will now vote on Dr. DeGurse and Dr. Denham.

The Delegates cast their ballots.

The Speaker: Has everyone voted? The Chair declares the ballot closed.

Dr. W. A. Hyland (Kent): Dr. DeGurse received 42 votes, and Dr. Denham received 22 votes.

The Speaker: I declare Dr. DeGurse elected as alternate delegate to the American Medical Association.

Next in order are nominations for alternate delegate to the A. M. A. to fill the term of Dr. Riley.

Dr. L. O. Geib (Wayne): I wish to nominate Dr. Riley.

Dr. Philip Riley (Jackson): I would rather withdraw my name. I do withdraw it, and I nominate Dr. Denham.

The Speaker: Dr. Riley has withdrawn his name and has nominated Dr. Denham.

Dr. B. L. Connelly (Wayne): I would like to see Dr. Denham and Dr. Ellet battle it out for second place. I would like to put Dr. Ellet up also.

Dr. H. A. Luce (Wayne): I move nominations be closed.

The motion was regularly seconded, was put to a vote and carried.

The delegates cast their ballots.

The Speaker: Has everybody voted? The Chair declares the ballot closed.

Listen to the report of the Tellers.

Dr. W. A. Hyland (Kent): Mr. Speaker, Dr. Denham received 34 votes, and Dr. Ellet received 30 votes.

The Speaker: I declare Dr. Denham elected alternate to the A. M. A.

I will relieve the Tellers for the next ballot, and I will appoint Dr. Connelly of Wayne, Dr. Greene of Shiawassee and Dr. Southwick of Kent to relieve these Tellers.

Dr. J. D. Brook (Kent): I would like to place in nomination Dr. Ellet for alternate.

Dr. W. A. Hyland (Kent): I move that nominations be closed, and the Secretary be instructed to cast the ballot.

The Speaker: Dr. Brook has placed in nomination Dr. Ellet as alternate to the A. M. A., and Dr. Hyland has moved that nominations be closed.

The motion was supported by several, was put to vote and carried.

Dr. L. J. Hirschman (Wayne): I move the Secretary cast the ballot for Dr. Ellet.

Dr. Hyland: I second the motion.

The Speaker: Motion has been made and seconded that the Secretary be empowered to cast the ballot of the assembly for Dr. Ellet as alternate.

The motion was put to a vote and carried.

The Secretary: I so cast

The Speaker: I declare Dr. Ellet elected.

Next in order is the election of a Councilor for the Seventh District, the term of Dr. Heavenrich having expired.

Dr. A. L. Callery (St. Clair): I am a sort of pinch-hitter tonight. We have a man representing the Seventh District whom we think is the best Councilor in the State. I don't know that there is any opposition to this statement.

You all know Dr. T. F. Heavenrich, who has already served the Society faithfully for a year. He has served acceptably for all the members of the Seventh District. I have much pleasure in presenting his name.

Dr. J. L. Chester (Wayne): I move that nominations for Councilor of the Seventh District be closed.

Dr. C. S. Gorsline (Calhoun): I will second that.

The Speaker: It has been moved and seconded that nominations for Councilor for this District be closed.

The motion was put to a vote and was carried.

Dr. J. D. Brook (Kent): I move that the Secretary be instructed to cast the ballot of this House for Dr. Heavenrich.

Dr. R. H. Denham (Kent): I second the motion.

The motion was put to a vote and was carried.

The Secretary: Your Secretary does so cast.

The Speaker: I declare Dr. Heavenrich elected as Councilor for the Seventh District.

Next in order is Councilor for the Eighth District, the term of Dr. Powers having expired.

Dr. T. J. Carney (Gratiot-Isabelle-Clare): Dr. Powers has served us well for several years in our District, and I take pleasure in presenting his name for re-election to succeed himself.

The Speaker: Are there any further nominations?

Dr. L. G. Christian (Ingham): I would like to present the name of Dr. Harry Ferguson.

Dr. A. H. Whittaker (Wayne): I second the motion.

The Speaker: Are there any further nominations? If not, we will consider nominations closed and have the Tellers proceed to collect the ballots.

Dr. O. G. Johnson (Tuscola): It has been customary in the past for the District to nominate their Councilor, and that was done before without any contest. I see no reason why there should be a contest for this election when seventy-five per cent of the delegates present are in favor of Dr. Powers.

The Secretary: May I take this opportunity of announcing to the House of Delegates that Dr. Wenger, who was the Treasurer of the Society, resigned that office last evening, and that the Council, after due

consideration, elected as Treasurer of the State Society Dr. William Hyland of Grand Rapids.

The Speaker: Dr. Hyland is one of the Tellers. I will have to ask him to arise and show his mustache to the assembly.

Dr. Hyland: I have been facing them all night. The delegation cast their ballots.

The Speaker: Have all votes been cast, gentlemen? If so, I declare the ballot closed.

We will now receive the report of the Tellers.

Dr. I. W. Greene (Shiawassee): Mr. Speaker, Dr. Powers received 39 votes; Dr. Ferguson received 29.

The Speaker: The Chair declares Dr. Powers elected as Councilor for the Eighth District.

Next in order are nominations for Councilor for the Ninth District, the term of Harlan MacMullen having expired.

Dr. A. A. McKay (Manistee): I would like to place in nomination Dr. Harlan MacMullen to succeed himself.

Dr. E. B. Minor (Grand Traverse): It gives us very great pleasure to support that nomination.

The Speaker: Are there any further nominations, gentlemen?

Dr. L. W. Switzer (Mason): I move that nominations be closed.

The motion was regularly seconded, was put to a vote and carried.

Dr. L. J. Hirschman (Wayne): I move that the Secretary be instructed to cast the ballot for Dr. MacMullen.

Dr. R. H. Denham (Kent): I second the motion. The motion was put to a vote, and was carried.

The Secretary: Mr. Speaker, your Secretary has so cast.

The Speaker: I declare Dr. MacMullen elected.

Nominations are now in order for Councilor for the Tenth District, the term of Dr. Paul Urmston having expired.

Dr. C. R. Keyport (Otsego-Montmorency, etc.): I wish to place in nomination the name of Paul R. Urmston of Bay City. Dr. Urmston has served as Councilor and the members of the constituent societies of the Tenth District are anxious to see him returned.

Dr. L. P. Foster (Wayne): I wish to second that nomination and bring to you the information that about ninety-five per cent of the members of the Tenth District in open meeting have endorsed the candidacy of the present incumbent.

The Speaker: Are there any further nominations?

Dr. J. D. Brook (Kent): I move the nominations be closed, and that the Secretary be empowered to cast the unanimous ballot of this House for Dr. Urmston.

The motion was regularly seconded.

The Speaker: It has been moved and supported that nominations be closed, and the Secretary be empowered to cast the unanimous ballot of the House of Delegates for Dr. Urmston as Councilor for the Tenth District.

The motion was put to a vote, and was carried.

The Secretary: Mr. Speaker, the Secretary has so cast.

The Speaker: I declare Dr. Urmston elected.

The Secretary: By reason of the election of Dr. LeFevre, Councilor of the Eleventh District, to the office of President-elect, there is a vacancy in the office of Councilor for the Eleventh District.

Dr. J. D. Brook (Kent): Is there anything in the Constitution which provides that the President-elect must vacate his office of councilor, or is it a precedent that he must vacate his office as Councilor?

The Secretary: The Constitution and By-laws are silent on both questions.

Dr. L. W. Switzer: I wish to place in nomination

the name of Dr. Treyner of Mecosta as Councilor for the Eleventh District.

Dr. R. H. Denham (Kent): It seems to me a ruling should be had one way or the other on the question of the vacancy before you entertain nominations for this possible vacancy.

The Speaker: It might be a delicate question to decide, but of course we all know we wouldn't go very far amiss. Dr. LeFevre surely would resign. I think he expressed himself that way right here on the stage.

Dr. I. W. Greene (Shiawassee): Doesn't the Constitution state that the President-elect would be ex-officio member of the Council? Doesn't that settle the question?

Dr. L. O. Geib (Wayne): I move that nominations be closed.

The motion was regularly seconded, was put to a vote and carried.

Dr. Geib: I move that the Secretary cast the ballot.

The motion was regularly seconded.

The Speaker: It has been moved and seconded that the Secretary be empowered to cast the ballot for Dr. Treyner as Councilor for the Eleventh District.

The motion was put to a vote, and was carried.

The Secretary: I do so cast.

The Speaker: I declare Dr. Treyner elected as Councilor for the Eleventh District.

Next in order of business is the place for the annual meeting.

Dr. B. R. Corbus: The Council has before it two invitations for the next annual meeting, one from Sault Ste. Marie, and the other from Grand Rapids. They have sent us, according to our regulations, statements as to what they can do for us.

Do you want to have those invitations read?

Vice Speaker Dutchess took the chair.

Dr. Corbus: One is from Dr. Bandy representing his District.

Dr. Corbus read the communication from Dr. Bandy, and also a communication inviting the meeting to hold its convention in Grand Rapids.

Vice Speaker Dutchess: You have heard the invitations. Do you wish to proceed to select the place of the next meeting by a rising vote? If that meets with general agreement, we shall proceed to select the place of meeting in that way. Is there any objection?

All those in favor of holding the next meeting at Sault Ste. Marie, please arise. (Twenty-six.)

All those in favor of holding the next meeting at Grand Rapids, please arise. (Twenty-nine.)

The result of this vote is that Sault Ste. Marie had twenty-six, and Grand Rapids twenty-nine. It therefore appears to be the sense of the meeting that they wish to select Grand Rapids as the place of meeting in 1933.

I will now entertain nominations for the office of Speaker of the House.

Dr. John Sundwall (Washtenaw): It isn't necessary for me to indulge in a long statement calling the attention of the delegates to the qualifications of the man whom I wish to nominate. We are all familiar with him. You are familiar with his splendid work in connection with the House of Delegates.

I take the greatest pleasure in nominating the genial, efficient, present incumbent, Dr. Henry Pyle of Grand Rapids.

Dr. C. T. Ekelund (Oakland): I move that nominations be closed, and the Secretary cast the ballot of the House of Delegates for Dr. Pyle for re-nomination.

Dr. K. B. Brucker (Ingham): I second the motion.

The motion was put to a vote, and was carried.

The Secretary: Your Secretary does so cast.

Vice-Speaker Dutchess: I declare Dr. Pyle elected Speaker of the House.

Dr. Pyle resumed the chair.

The Speaker: I am particularly proud of my pin. I can keep it another year. I promised you that next year we will do things to expedite matters in the matter of election. Dr. Biddle's suggestion to-night might have been carried out if the Chair had not ruled we would elect singly. We hope to do it a little better next year, and you will see me in my home town. Any shortcomings I might have today I have a little alibi for, and that is due to the very good entertainment committee that starts to work on a man very early, which they did with your Speaker last evening.

Next in order are nominations for the office of Vice Speaker.

Dr. H. A. Luce (Wayne): On behalf of the twenty-five delegates from Wayne County, I take great pleasure in nominating Dr. Charles E. Dutchess to succeed himself as Vice Speaker of the House of Delegates of the Michigan State Medical Society.

Dr. L. G. Christian (Ingham): On behalf of the two delegates from Ingham County, I support that nomination.

The Speaker: Are there any further nominations?

Dr. R. H. Denham (Kent): I move that nominations be closed, and the Secretary be instructed to cast the ballot for Dr. Dutchess.

The motion was regularly seconded, was put to a vote and carried.

The Secretary: Mr. Speaker, your Secretary does so cast.

The Speaker: The Chair declares Dr. Dutchess elected to the office of Vice Speaker.

Is there any unfinished business?

Dr. J. D. Brook (Kent): Mr. Speaker and members of the House: For a number of years you have elected me biennially as delegate to the American Medical Association. I cannot express to you how sincerely I appreciate and how greatly I value this renewed expression of your confidence in re-electing me again today.

I trust that my action as your representative will always merit respect. I most sincerely thank you.

The Speaker: Is there any other business, gentlemen?

Dr. A. P. Biddle (Wayne): I move a vote of thanks to the Speaker, the Vice Speaker and the Secretary for the efficient manner in which the session has been conducted.

The motion was regularly seconded, was put to a vote and carried.

Dr. J. D. Brook (Kent): Mr. Speaker and Members of the House: With your consent, I would like to introduce this resolution:

"WHEREAS, The House of Delegates of the Michigan State Medical Society in annual session at Kalamazoo, September 13, 1932, accepted a motion for the appointment of a committee on the study of birth control; therefore, be it

"RESOLVED, That this resolution as adopted by this House of Delegates be introduced in the House of Delegates of the American Medical Association by the Michigan delegation at the next annual meeting of the American Medical Association."

I move the adoption of the resolution.

The motion was regularly seconded, was put to a vote and carried.

Dr. E. D. Spalding (Wayne): The House has already taken action on this subject, and no action was to be taken until the report of that committee.

The Speaker: The way the Chair understood the motion, it was that the A. M. A. would take similar

action to our action today. That was the sense of your motion, wasn't it, Dr. Brook?

Dr. J. D. Brook (Kent): Yes.

Dr. L. O. Geib (Wayne): Inasmuch as the next session of the House of Delegates is set for February, it seems reasonable to table the motion and take it up at the February session, which will be in plenty of time to present it to the A. M. A.

Dr. E. D. Spalding (Wayne): This is contrary to the action taken by this body, and the motion is out of order. Dr. Brook's motion is out of order, and it isn't necessary to table the motion.

The Speaker: The sense of Dr. Brook's motion was that the American Medical Association take the same action as we did today, to appoint a committee for study.

Dr. Stanley Insley (Wayne): It reads specifically, "That the Council refrain from committing this Society to any policy or position." I think Dr. Brook's motion is out of order.

Dr. J. D. Brook (Kent): I withdraw the motion and the resolution.

The Secretary: I know it is a little early to tell you something of the hospitality of Kalamazoo which you are going to experience not only this evening but also tomorrow and the next day. It is my particular pleasure at this time to present to you the President of the Kalamazoo Academy of Medicine, and the superintendent of the local state asylum. Any of you who have failed to secure your hotel reservations, I am sure Dr. Morter can accommodate you at his institution on the hill. Dr. Morter, President of the Kalamazoo Academy of Medicine.

Dr. R. A. Morter: Delegates of the Michigan State Medical Society: We planned a little surprise for you at the close of this meeting. We planned to put on a buffet luncheon at the Kalamazoo Country Club. We are planning to entertain about 250 people, but I don't see that many here, so come prepared to eat what three men could.

I understand you will adjourn in about five minutes. I don't know whether we will have enough transportation for you. There has been a little slip-up on our transportation. I wonder how many have their own cars nearby. If they are nearby, we can form a sort of convoy and go out, and those who haven't transportation we will take out by taxicab.

I don't know of anything else to say, and we will see you out there, I hope. I do hope every one of you will come.

The Speaker: Is there any other business, gentlemen?

Dr. C. E. Dutchess: I move that the House express a vote of thanks to Kalamazoo and to the local society for their entertainment of the House of Delegates.

The motion was severally seconded, was put to a vote and carried.

The Speaker: Is there any other business? The House is adjourned.

The meeting adjourned at nine o'clock.

Attest: F. C. WARNSHUIS,
Secretary.

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MINUTES OF THE COUNCIL

The Council of the Michigan State Medical Society convened in Annual Session in Kalamazoo on Monday evening, September 12, 1932. The meeting was called to order by the Chairman, Dr. Corbus, with the following Councilors present:

B. R. Corbus, Chairman; Henry Cook, Vice-Chairman; Henry R. Carstens, A. S. Brunk, George C. Hafford, C. E. Boys, T. F. Heavenrich, Julius Powers, Harlan MacMullen, Paul R. Urmston, George Le Fevre, Richard Burke, B. H. Van Leuven, J. D. Bruce, C. A. Neafie, Carl F. Moll, President; J. Milton Robb, President-Elect; F. C. Warnshuis, Secretary.

1. The Chairman presented Dr. F. T. Andrews, Chairman of the local committee on arrangements, who made a detailed report of the local arrangements for the present Annual Session. The Chairman thanked the doctor and his committee and expressed the assurance that we would enjoy the provision that had been made for our comfort during the Annual Session.

2. On motion of Bruce-McIntyre, the Minutes of the Executive Committee as published in the JOURNAL were approved and made part of the Minutes of the Council.

3. The Secretary then read paragraph by paragraph the Annual Report of the Council to the House of Delegates. After complete discussion, upon motion of Neafie-Le Fevre, the report was approved and the Chairman directed to present the same at the first session of the House of Delegates. (See Official Minutes of the House of Delegates.)

4. The Secretary presented a report and statement upon the History of the Michigan State Medical Society. Upon motion of Cook-Boys, the Secretary was instructed to sell the remaining copies of the History at \$7.50 per set and was further instructed to give a rebate of \$2.50 per set to those members who had as yet failed to pay for the last volume of the History.

5. The Secretary presented a detailed report of the present financial situation of the Society and its quick assets. He imparted that during this year the Council had given a rebate of \$2.50 upon the membership dues, which entailed a lessened income from dues to the amount of \$8,400. It was further reported that the activities of the Special Committee on Survey of State Health Agencies would incur an expenditure during the year of some \$5,000.

A report was also made upon the number of members who had paid their current dues by note. It was further shown that before the end of the year it would be necessary to make

a temporary loan to defray the expenses of the Special Committee and also the expenses incurred by the Medical Legal Committee. The Council engaged in a full discussion of the finances of the Society and the following resolution was presented by Councilor Le Fevre and supported by Councilor Carstens:

"WHEREAS, from a review of the financial status of the Michigan State Medical Society, it becomes apparent that it would be unwise at the present time to sell any of the reserve securities of the Society, and

"WHEREAS, it is apparent that it will be necessary to make a temporary loan from some bank in order that the Society may defray its current expenses up to January 1, 1933,

"THEREFORE, BE IT RESOLVED, that the Secretary of this Society be empowered by and with the advice of the Chairman of the Council and the Chairman of the Finance Committee to make such temporary loans as is necessary and that he be hereby empowered to place sufficient of the Society's securities as collateral to these loans."

The resolution was put to a vote and was adopted by the unanimous vote of the members of the Council.

6. Councilor Cook presented a communication from the Michigan Council on Governmental Expenditures, in which the State Medical Society was invited to become a member of this state organization. After discussion, on motion of Powers-Brunk, the communication was referred to the Legislative Committee with instructions to investigate the desirability and advantages of such an affiliation, and the Executive Committee to act in accordance with the recommendations of the Legislative Committee.

7. Dr. A. V. Wenger, Treasurer, made a statement that inasmuch as he was a delegate from the Kent County Medical Society he could not hold the office of Treasurer; that at the solicitation and insistent request of the Kent County Medical Society that he continue as delegate, he therefore regretfully tendered his resignation as Treasurer of the State Society. Upon motion of McIntyre-MacMullen, Dr. Wenger's resignation was accepted.

8. Upon motion of Cook-Heavenrich, the Secretary was instructed to cast the ballot of the Council for Dr. Wm. A. Hyland of Grand Rapids for the office of Treasurer of the Society. The Secretary did so cast and the Chairman declared Dr. Hyland duly elected Treasurer of the Society.

The Council adjourned at 11:15 P. M. to meet again at the call of the Chairman.

SECOND SESSION OF THE COUNCIL

At the call of the Chairman the Council met in Kalamazoo on Wednesday, September

14, 1932, at 4:00 P. M. It was called to order by the Chairman with the following Councilors present:

B. R. Corbus, Chairman; Henry Cook, Vice Chairman; Henry Carstens, George C. Hafford, C. E. Boys, T. F. Heavenrich, Harlan MacMullen, Paul R. Urmston, George Le Fevre, Richard Burke, B. H. Van Leuven, J. D. Bruce, C. A. Neafie, Carl F. Moll, President; J. Milton Robb, President-Elect; F. C. Warnshuis, Secretary.

1. The Secretary reported nothing had been referred to the Council from the House of Delegates that required action at the present time.

2. Elections—The Chairman retired and the Vice-Chairman of the Council assumed the chair. Dr. Boys nominated Dr. Corbus for the office of Chairman of the Council for the ensuing year. The nomination was supported by Heavenrich-MacMullen. Upon motion of Neafie-Hafford the nomination was declared closed and the Secretary instructed to cast the ballot of the Council for Dr. Corbus as Chairman for the ensuing year. The Secretary did so cast and the Vice-Chairman declared Dr. Corbus elected Chairman of the Council for the ensuing year.

The Chairman assumed the chair. Dr. Heavenrich supported by Dr. Carstens placed in nomination Dr. Henry Cook as Vice-Chairman of the Council. Upon motion of Carstens-Hafford the Secretary was instructed to cast the ballot of the Council for Dr. Cook. The Secretary did so cast and the Chairman declared Dr. Cook elected Vice-Chairman for the ensuing year.

The Executive Committee.—Upon motion of Heavenrich-Cook, the Council proceeded to the election of Chairmen of the Council's committees, which chairmen, together with the Chairman and Vice-Chairman of the Council, shall constitute the Executive Committee of the Council. Carried.

Councilor Burke supported by Councilor McIntyre nominated Councilor Henry Carstens as Chairman of the Finance Committee; Councilor Heavenrich supported by Councilor McIntyre nominated Councilor J. D. Bruce as Chairman of the Publication Committee; Councilor Heavenrich supported by Councilor Bruce nominated Councilor C. E. Boys as Chairman of the Council's Committee on County Societies.

There being no further nominations, Dr. Hafford moved, supported by Van Leuven-Neafie, that the Secretary cast the ballot of the Council for these nominees as Chairmen of the Council's Executive Committee. The Secretary did so cast and the Chairman declared Doctors Carstens, Bruce and Boys

elected Chairmen of the respective committees to which they had been nominated.

3. The Secretary presented to the Council a petition from the members of the House of Delegates requesting the Council to call a special meeting of the House of Delegates during the first week in February, 1933. After considerable discussion it was moved to table this petition and to take it up for further consideration at the January meeting of the Council.

4. By vote of 7 for Detroit and 4 for Grand Rapids, the Council decided to hold its January Mid-Winter session in Detroit at a date to be designated by the Chairman.

There being no further business the Council adjourned at 5:30 P. M.

F. C. WARNSHUIS, *Secretary.*

THE SERVICE OF THE PROFESSION*

OLIN WEST, M.D.

Secretary and General Manager, American Medical Association
CHICAGO, ILLINOIS

Mr. President, Officers and Members of the Michigan State Medical Society, Ladies and Gentlemen: It happens that I am here in the capacity of a substitute, and my first duty is to discharge a commission which was almost sacredly laid upon me by the President of the American Medical Association, Dr. Cary, who was to have been the speaker of the evening, to convey to the members of the Michigan State Medical Society his most sincere regret that a very important errand in behalf of the entire medical profession of the United States made it impossible for him to keep his engagement here this evening.

I bring you greetings, Mr. President and members of the Michigan State Medical Society, from the headquarters organization of the American Medical Association, and the sincerest of good wishes for the continued success of this most efficient organization.

It was originally planned, as I was notified by Dr. Warnshuis, that I should inflict myself upon you for the space of ten minutes for the purpose of discussing the topic which is to be found on the program, namely, "Ideals of the Profession." I was later notified that because of Dr. Cary's enforced absence I would be expected to extend my remarks. I shall try, however, not to impose

*This address was delivered at the General Session of the Society in Kalamazoo, September 14, 1932. It is commended to the most serious consideration of our members. It should instil a determined spirit of loyalty and service.

myself upon you for such length of time as to become tiresome, I should like to say, before proceeding with what I want to put before you, that I fully realize much of it will be presented in rather dogmatic fashion, and that much of it will be in the nature of an extremely general statement without much regard for detail and without much regard for correlated statements that might be made along with those which will be submitted. I should like you to know before I begin that I fully understand my presentation of the matters I shall touch upon is not intended to be complete, but is intended to bring to you one important side of a picture that really exists and that is being intensified and becoming more and more real day after day.

The ideals of medicine are based on the very simple but the very high principle of service to mankind. Without ideals there could be no medical profession nor, for that matter, any other profession. From the very time of the founding of medicine, the interest of the patient and of the public has been the first consideration in the mind of every worthy physician. From that time until the present moment the knowledge developed by the ablest minds in medicine has been freely and conscientiously passed on to those coming after, always with the admonition and with the adjuration that such knowledge should be applied for the direct benefit of the individual patient and for the direct benefit of humanity in general.

That the primary purpose of the medical profession in its organized capacity is to maintain the ideals of medicine is shown in the statement of the aims and objects of the American Medical Association as set out in its organic law and in similar statements in the laws of its component county medical societies and constituent state medical associations. The aims and objects of the American Medical Association, as stated in its Constitution, are to promote the art and science of medicine, and the betterment of the public health. Its principles of medical ethics, based on the ideals of medicine, constitute a veritable bulwark for the protection of the public.

Without the promotion of the art and science of medicine, no improvement could have been effected in the public health in the past; nor will any be possible in the future except as a free, untrammled, inde-

pendent medical profession is permitted to continue and to intensify its efforts to develop its knowledge of the science of medicine, of the nature of health, of the causation and the prevention of disease, and to apply that knowledge for the benefit of mankind through methods of proved efficiency. Such methods can be developed only through the experience of a qualified, free profession, one unhampered by the dictates of politicians or by the propaganda of professional or amateur agitators, or by the pronouncement of theorists who know little or nothing of what is involved in the delivery of effective medical service.

Political domination of medicine will, in my humble opinion, undermine the ideals of the profession—which means that professionalism will surely be destroyed—will destroy scientific ambition, and will reduce physicians to the status of hirelings subject to the dictation of unqualified persons, and will subject the people to mechanized mass production processes developed without regard for biologic principles and facts that have operated since time began and that will continue to operate until time shall be no more.

Without professionalism in medicine there can be no successful application of the knowledge of scientific medicine nor any successful practice of the art of medicine which, because medical service must be given to human being by human beings, is quite as important in promoting the public welfare as is the science of medicine. Mass production methods cannot be successfully applied in the delivery of medical service. A mechanized group compelled to work under machine rules cannot minister to the sick with the humaneness and with the intelligent, sympathetic interest that is a necessary factor in the successful treatment of disease and in the alleviation of suffering. As long as human beings are human beings subject to the unchanging laws of nature, and as long as they must be served by human beings, their medical needs can best be supplied only as the individual relation of the physician and his patient is maintained. If men could be standardized, born to standardized specifications, with minds and aspirations exactly alike in all of them, with exactly equal opportunities and privileges, all subject to the same stresses and strains, and all reacting alike to the effects of infec-

tion, disease and injury, then perhaps machine methods and the principles of mass production could be applied in the practice of medicine with a reasonable degree of satisfaction to all concerned, provided the standardized individual of the standardized mass reacted in exactly the same way as every other one to methods applied for the relief and prevention of disease.

As the complexities of modern life have developed, and especially under the stress of an economic situation which has itself arisen because of an almost absolute disregard for biologic facts and for the fundamental principles of sound economics, there has arisen a great cry about the cost of medical care, the methods of medicine, and the methods of medical practitioners. Some of this agitation has undoubtedly been fully justified. It started in fact in the medical profession, who better than any other group has always been in position to recognize untoward developments in its own field and who more than any other group, has persistently striven to secure the correction of untoward conditions and to make its services as efficient and as fully available to all mankind as possible.

There has been considerable discussion of some of the problems involved in the delivery of medical service by earnest and intelligent laymen who have a genuine interest in human affairs, and who fully appreciate the fact that none but a qualified and an independent profession can satisfactorily minister to the needs of the people. There has also been a great deal of discussion emanating from equally sincere laymen who have little understanding of the relations of medicine and whose faith in socialistic schemes is apparently more profound than is justified by the facts of history.

Then there has been a mass of propaganda carried on by professional agitators and theorists, and equally as much coming from very earnest persons whose ideas are many times based on sentiment rather than on fact and a clear understanding of the nature of the problems, whose solution they would effect by the very simple process of indulging in much talk.

Committees and commissions, under various auspices, have conducted all sorts of studies, some of which have studiously avoided the presentation of any side of the picture except that side which can best be

used in support of argument devised to effect the accomplishment of certain ends through which, in my opinion at least, the best interests of the public will not be served.

Others of these studies and reports of some of these committees and commissions have brought out many facts of the greatest importance, practically all of which have previously been recognized by the medical profession and have received its earnest consideration to a degree, in many instances, that has resulted in great improvement of conditions that formerly existed.

As a result of the truly marvelous advancement in scientific knowledge pertaining to health and disease, and the remarkable improvements of the methods by which this knowledge can be applied; as a result of the complexities of modern life, many of which have grown out of the adoption by the people of all sorts of artificialities, as, for instance, the erection and the occupancy of those terrible monstrosities which we call modern cities; and as a result of other factors of a political or economic nature, which cannot be mentioned in any short discussion such as this is intended to be, the cost of medical and hospital care has certainly increased and, in all probability, will be subject to further increases. But, at the same time, the value of medical service has enhanced even more than the cost of service has increased, because it is far more efficient than ever before and, many statements to the contrary notwithstanding, is more easily available to more people than ever before in the history of this land.

Some of the agitation above referred to and, of late, the pinch of hard times have been largely responsible for the promotion of all sorts of artificial schemes for providing medical service under the claim that the cost of medical and hospital care will be reduced and that service will be more easily available to the public. Most of these schemes are altogether similar in their general nature to those known in the business world as cut-rate schemes, to deal with which federal and state agencies have been established on the insistence of business leaders who know that wares of high quality cannot be provided on the usual cut-rate basis. Many of these plans (promoters like to call them plans) are promoted by laymen for purely commercialistic purposes and will surely fail completely unless profits in money

are produced, and few of them will provide good service even if money profits are satisfactory to their promoters.

Many so-called health and hospital associations have been promoted within the last few years, most of them during the current financial depression, and many of them have already failed. Others will surely fail. These, for the most part, have also been launched on a cut-rate basis, and it is altogether probable that many of them will find it impossible to deliver what they have promised under the contracts they have sold if, by reason of any emergency, they are called upon to provide an even slightly greater amount of service than they originally expected to deliver. Their promoters frequently insist that they are safe because they have provided themselves with actuarial figures that show just what demands will be made on them. I confess my faith in actuaries and their calculations is not so great as that of some of the brethren. I remember the failures of too many pension schemes promoted by great industrial organizations who paid out large sums of money to actuaries for figures that proved to be wrong.

What is known to physicians generally as contract practice is virtually running wild in some parts of the country, its widespread and extremely rapid development having apparently taken place because of the stress of the present economic situation.

The Judicial Council of the American Medical Association, whose personnel is rarely changed by the replacement of more than one member in any five years, has been studying these problems that Dr. Moll and I have been trying to talk about here tonight for a long, long time. That Council has held that contract practice *per se* is not unethical and that, under certain conditions, contract practice may be necessary. But it is not the ethical contract practice I am talking about here, nor is it that kind of contract practice which in the opinion of the Judicial Council (a very thoughtful body) may be considered necessary.

The adoption of poorly considered laws pertaining to workmen's compensation undoubtedly stimulated the development of contract practice, some of it of the most pernicious nature. I mean there that this has happened in certain states and not in all states, because some of the workmen's com-

pensation laws have been almost entirely satisfactory to everybody concerned; but in many of the states these laws were poorly considered in the first place and have been poorly administered since their adoption and have led to certain pernicious practices concerned with the delivery of medical service. It appears to be the general tendency of the holders of contracts, under which medical service is to be provided, to take full advantage of every opportunity to hammer down the fees stipulated in these contracts. Since good service cannot be provided for little or nothing, the result is, almost invariably, that the quality of the service constantly deteriorates and the people suffer accordingly.

Certain insurance companies in some parts of the country have put on the market health and hospital policies under which policyholders, for comparatively nominal sums, are to be provided with medical and hospital care. It may be, as Dr. Moll has already indicated in the splendid address he made to you, that some form of health insurance will finally be developed under which the medical profession will not be socialized and mechanized, but some of the schemes that are now being promoted by insurance companies, some of them organized for the specific purpose of selling the policies I am talking about, will never under any circumstances provide adequate service to policyholders for the reason they are operating on entirely wrong principles and under plans which make it impossible for qualified physicians to even have the opportunity of providing good service for such policyholders.

I recently had a visit from the promoter of a so-called health and hospital policy, to be sold by an insurance company organized for the specific purpose, who told me that some of the best physicians in his state had already signified their intention to align themselves with the activities of this company, and that the policyholders would be permitted, under the terms of the policies, free choice of physicians. I have since been informed that those physicians, having looked into matters more carefully, have withdrawn their promised support. I have also heard of another insurance company that is said to have sold a number of policies providing for free choice of physicians by policy holders that will change its plan so that the purchasers of new policies will be compelled to accept service at the hands of

physicians who are to serve under the direction of the officers of the company. This particular enterprise, I am told, is a recent promotion.

It is my opinion that many of the artificial schemes that have been promoted in the recent past are largely the result of the strain of the economic situation, and partly the result of agitation that I have referred to earlier in this statement, and that they have been put into operation with little thought as to the ill effects they will have in future years on the welfare of the profession and on the best interests of the people. It is a serious thing to propose that an institution that has developed on the basis of an age-old experience should be overthrown. It is a serious thing to even propose that any very radical changes should be made in an institution that for hundreds of years has served with singular devotion for the benefit of mankind the world over. Medicine has not been static, but from its very beginnings has been progressive. From the time of Hippocrates to this present moment there has been almost uninterrupted progress in the development of scientific knowledge and a very constant improvement in the methods of its application.

We of right may challenge the world to produce a record of greater progress or of more efficient and unselfish service than has been made by the practitioners of medicine. I know full well that the medical profession is not perfect and that it never will be perfect, because it is made up of human beings. We all know perfectly well that there exist certain inequalities with respect to the easy availability of medical service, just as they exist with respect to the availability of any other needful service. These uneven opportunities have always existed and always will exist unless the very laws of Nature itself are changed.

We know very well that the larger part of the people of the country receive smaller incomes than are enjoyed by a distinct minority, but we also know that all the people have available today more medical service and better medical service than ever before, and we know that this is so because medicine and the medical profession have not been static but have constantly moved forward in the development of knowledge and in the improvement of facilities for making that knowledge useful and helpful to

mankind the world over. None of the inequalities above referred to would justify the adoption of machine methods nor the socialization of medicine. The socially minded citizens who are so concerned over the cost of medical care might well bend their efforts toward the correction of the uneconomic situation whereby a large mass of the people who are able to work, willing to work, and do work, are unable to earn incomes that will enable them to purchase needed service on an independent basis and in accordance with the original principles of Americanism.

At the same time, the organized medical profession in every state and in every county should study existing conditions with scrupulous care and, in accordance with the high ideals of medicine, should use the utmost endeavor to correct any of its own faults and to correct untoward practices of its own members that are harmful and not for the good of the public. I have no objection whatever to any experiment that has been well considered by those who know what is involved in the delivery of medical service, and that is conducted under proper auspices; but I would admonish physicians of this country that they should withhold themselves from participation in the purely commercialistic schemes that are being promoted under the guise of philanthropy and under the false pretense that they offer a worthy service to the people. I would admonish them to withhold themselves from participation in cut-rate plans that cannot provide efficient service unless severe financial loss is sustained. It is rare indeed that the promoters of these plans are willing to bear financial loss, which means that the service delivered under them will surely be inferior.

I would admonish physicians to carefully examine every proposal submitted to them with a view to their active participation in any sort of new or artificial scheme for providing medical service to the people at a nominal cost. Good medical service cannot be provided at a nominal cost unless somebody makes a very considerable sacrifice, and many, many times it has been the doctor who has been called on to make all of the sacrifice. It is wrong to lead people to believe that good service can be furnished at any very small cost, for the simple reason that it is not true.

There is nothing that can take the place

of scientific medicine practiced through the high art that has been developed in the experience of generation after generation of devoted physicians. In accordance with the ideals of medicine, every worthy physician will strive to make his own knowledge greater and to make its benefits available to all who need his ministrations. That can be done only as the physician is given reasonable compensation for his services and as he is permitted to preserve his independence as a member of a profession, devoted to the cause of medicine and to the service of humanity, free from the dictation of those who lack the necessary understanding of the aims, the ideals and the possibilities of medicine.

Every efficient organization of physicians will strive to effect the scientific improvement of its every member and to create conditions under which the public will be best served; and that can be done without overthrowing an honored institution built on the labors and sacrifices of a profession that has ministered to the deepest needs of the people of the world, through many hundreds of years, with courage, with humaneness, and with marked efficiency.

I thank you for your very courteous attention.

NEWSPAPERS AND HEADLINES

Americans are a headline reading people. Few read all of a newspaper; their impressions reflect just the large type that they see. This fact has resulted in some agitation relative to the heading frequently appearing in the press indicating that death in some cases has followed an operation. Thus Dr. Bransford Lewis asserts, and several editors of newspapers agree, that the heading "Dies Following Operation" can have no other effect except to bring about phobia against surgical procedures, perhaps fear so great as to result in postponed operation in cases in which operation may be the only method of saving life. Since surgery is undertaken with the idea of prolonging life, the constant reiteration of the phrase "Dies Following Operation" serves an antisocial purpose. Newspaper editors might well give the subject serious attention. The cause of death may be cholecystitis, appendicitis, brain tumor or any one of a number of serious conditions which might well be mentioned in the title of the article rather than the fact that operation failed to save the patient.—*Journal A. M. A.*

YOUR COUNTY SOCIETY

Your County Society is what you as a member make it. Many profitable opportunities confront you if you will determine to embrace them. Attend every meeting. Participate in every discussion. Work on Committees. Become a Booster. You will have a wonderful Society if you do.

SOCIETY ACTIVITY

"THE PROFESSION INDEPENDENT"

"Without the promotion of the art and science of medicine, no improvement could have been effected in the public health in the past, nor will any be possible in the future except as a free, untrammelled, independent medical profession is permitted to continue and intensify its efforts to develop its knowledge of the science of medicine, the nature of health, the nature of the causation and the prevention of disease, and to apply that knowledge for the benefit of mankind in accordance with the methods of proved efficiency which can be developed only through the experience of a qualified, free profession, one unhampered by the dictates of politicians, or by the propaganda of professional or amateur agitators, or by the pronouncement of theorists who know little or nothing of what is involved in the delivery of effective medical service."

Thus did Doctor West declare during our General Session in Kalamazoo. In these days that witness the promotion of a wide variety of plans and schemes for the providing of medical care by hospitals, clinics, lay groups, clubs, insurance organizations and medical cliques on some flat rate pay basis, Doctor West has tersely pronounced a sound fundamental principle.

If you desire to be a mere paid artisan, a hireling, subject to lay domination and political bossism, then join and support these movements that will debase and destroy the science and art of medicine. On the contrary, if you are eager and zealous to maintain the ideals and progress of medical science and art and practice as an independent doctor, then combat these plans and promotions. Adopt the following principles, formulated by the A. M. A. Bureau of Economics.

PRINCIPLES

1. The welfare of the patient is of primary importance.
2. The unity of medical organization must be preserved.
3. *Free choice of physician must be guaranteed.*
4. Opposition to unfair competition among physicians must be maintained.
5. Sacrifice of quality of service through the action of commercial competition shall not be tolerated.

- 6. Direct or indirect solicitation of patients, through paid agents by whatever name, or otherwise, cannot be permitted.
- 7. Full responsibility for the determination of all questions of professional qualifications and ethics should be vested in the medical organization.
- 8. Compensation to physicians should be adequate for competent service.
- 9. Preventive or preclinical medicine must not be neglected.
- 10. Any change in the method of administering medical care should always be preceded by careful and thorough study by organized medicine.

YOUR ADVERTISERS

Those firms and institutions who purchase advertising space in your Journal are your patrons. They in turn have every right to expect your patronage. It is of pressing moment that you and every other member give immediate heed to this request.

Those now employing space in our advertising pages have been most loyal patrons. They have contributed to make your Journal possible. The least appreciation that you can accord is patronage. Send them an order, write for their literature, assure them that whenever possible you will give them preference.

If you want your Journal to be more valuable to you, more helpful articles and features, then patronize your advertisers exclusively.

ANNUAL PROGRAMS

Our Kalamazoo meeting was well attended. The scientific program evoked and maintained interest. The speakers were a representative group and their subjects were of practical interest. The plan of section meetings in the morning and combined section meetings in the afternoon was an innovation.

In order to sense the members' desires as to whether this plan should be observed next year, the opinions of section officers were secured. Their replies are imparted herewith. We now solicit the opinions and recommendations of individual members. May we have yours?

University of Michigan,
Ann Arbor
September 23, 1932

My dear Dr. Warnshuis:

In reply to yours of the 19th would say that I believe the arrangement as carried out at the last State Medical Meeting was very satisfactory. In

fact, it struck me as being one of the best State Meetings that I have attended.

I believe that by combining the Section Meetings in the afternoon it is possible to have a more distinguished group of speakers and consequently thus enhance a greater attendance. I would certainly like to see the next meeting carried out in much the same manner. I think you are to be congratulated on the success of this last meeting.

The officers elected in the Section on Obstetrics and Gynecology for 1933 are: Norman F. Miller, M.D., Ann Arbor, Chairman; Harold Mack, M.D., Detroit, Secretary.

A word of explanation is perhaps indicated. In my chairman's address I made three recommendations entitled, "A Work Plan for the Section on Obstetrics and Gynecology." Apparently the members of the Section felt that the recommendations were sufficiently worthwhile to warrant their development and consequently they re-elected me chairman, presumably with the hope that I might get the "work plan" started.

Sincerely,
NORMAN F. MILLER, M.D.

* * *
Detroit, Michigan
September 20, 1932

Dear Doctor Warnshuis:
In reply to your letter of September 19:
1. I feel that holding section meetings in the morning and combined section meetings in the afternoon is a mighty fine idea if carried out. In passing I feel that the Pediatric Section did not coöperate with our section in that they had Dr. Francis Seneor of Chicago speak before them on Infantile Eczema in their morning section. If they had passed the word along, we would have been delighted to have invited him before us in the morning and to speak before the combined meeting in the afternoon. As it was, he spent his time between our section and Pediatrics upstairs. He gave a fine discussion on Dr. Jamieson's Psoriasis paper.
2. I would recommend that the Kalamazoo plan be carried out at our next annual meeting.
3. Our section officers are: Dr. George H. Belote, Ann Arbor, Chairman; Dr. Arthur Woodburne, Grand Rapids, Secretary.
I wish to take this opportunity to congratulate you upon the excellent way in which you conduct the meetings as our Secretary.

Yours very sincerely,
C. K. VALADE.

* * *
University of Michigan,
Ann Arbor,
September 26, 1932

Dear Dr. Warnshuis:
I am very much in favor of the combined meetings as far as state societies are concerned. I believe it is a mistake to work on the section plan and would even suggest that it would be beneficial to limit the morning work to a surgical and a medical section. The officers for the Section on Dermatology and Syphilology for the coming year are as follows: Dr. George H. Belote, Ann Arbor, Chairman; Dr. A. R. Woodburne, Grand Rapids, Secretary.

Very truly yours,
G. H. BELOTE, M.D.

* * *
Owosso, Michigan
September 24, 1932

Dear Doctor Warnshuis:
It was my impression that the scheme of program worked very well this year. I know that our Section was well pleased and I heard a good deal of favorable comment. I certainly would be in favor of

a rather similar scheme next year. I think perhaps we should try to put a little more thought on the afternoon programs and think it would be an excellent idea if the section officers could get together twice during the year—once in the winter as we have been doing and again in the late spring or early summer—to iron out any difficulties that may have come up in regard to the general program.

Sincerely yours,

J. W. GREENE,

Chairman of Medical Section.

* * *

Flint, Michigan

September 23, 1932

Dear Dr. Warnshuis:

In reply to your letter of the 19th inst., I will say in regard to the first question, that I am certain that the recent meeting at Kalamazoo indicated the fact that the section meetings in the morning and the combined meeting in the afternoon was very favorably accepted. (2) I would recommend that this plan be carried out for the 1933 meeting unless the committee should strike something more acceptable.

The officers for the Surgical Section are: Dr. G. J. Curry, Chairman, and Dr. H. K. Shawan of Detroit, Secretary.

Very truly yours,

GEORGE J. CURRY, M.D.

* * *

Detroit, Michigan

September 21, 1932

Dear Dr. Warnshuis:

In the first place I should like to offer my abject apologies for "grousing" about the change in the meeting place of the medical section. You certainly chose the most satisfactory place obtainable in Kalamazoo—or in any other part of the state. As a matter of fact, from the unlooked-for attendance, it would have been very unfortunate to have had the Academy of Medicine Auditorium, which I understand accommodates only 100.

I felt at the end of it that we had had a pretty good meeting, and hope that the others felt the same way. There was a surprisingly good turn-out and an unusual number of people who stuck to the end, even thought that end was late at both morning sessions.

With best regards, I am,

Very sincerely yours,

R. M. MCKEAN.

* * *

Grand Rapids, Michigan

September 20, 1932

Dear Dr. Warnshuis:

In past years I have noticed that our good crowd in the Pediatric Section does not congregate until about two in the afternoon. This year Dr. Spooner of Toronto and Dr. Desjardins of Mayo's talked to about twenty men—which I thought was almost criminal. Therefore, I would be in favor of having section meetings lasting all day.

Very sincerely yours,

T. D. GORDON.

* * *

Pontiac, Michigan

September 20, 1932

Dear Doctor Warnshuis:

In reply to your first question, I certainly think that the plan of the Kalamazoo meeting, of individual sectional meetings in the morning, and meetings for the entire session was a good thing.

It was very discouraging to have such a meager turnout in our Pediatric Section. Dr. Gordon and I went to the trouble and expense of sending a special typewritten letter to each man. We had an

unusual number of prominent speakers. It may be that we were unwise in allowing certain Detroit men to speak because "a prophet is not without honor," etc. The fact that Dr. Barnes' paper may have been influenced by the Upjohn people, seemed to create comment. On the other hand, such outstanding men as Desjardins, Seneau, and Spooner, to say nothing of Dr. Hasley's excellent paper were each one alone worth the trouble and expense of going to hear.

I am considering interviewing by letter, or otherwise, the members of the section to ask their support. It does not seem to me to be worth while to go to all the trouble and expense of such a fine program, "if I do say it myself," for such a small turn-out. Only seven section members were present, and I was unable to count over twenty in the audience at any time.

The officers for the ensuing year are: Dr. Campbell Harvey, Pontiac, Chairman; Dr. Edgar Martmer, 749 David Whitney Bldg., Detroit, Secretary.

There are two factors which may enter into our small attendance—the depression and the Central States Pediatric Meeting early next month. However, I am sure that they can offer nothing better than we offered at Kalamazoo, as far as the scientific end is concerned. Personally, the papers by Goldthwait, Vaughan, and Arbuckle were splendid, and I noticed that Dr. Levine, of Boston, held the medical section well on into the afternoon. I wish it were possible, however, to be able to hear papers on other sections. For instance, there was a paper on contraception in the Obstetrics Section which I should have liked to hear, without missing an important one in our section. Perhaps it might be possible to work out a scheme whereby related subjects could have sections on different days.

I am sorry, for your sake, that you let yourself in for a letter like this, but my feelings are running pretty deeply and strongly. We could make a great thing out of this if we wanted to.

Allow me to congratulate you on the success of this convention as a whole. I have heard nothing but favorable comment. I personally not only enjoyed it, but came away satisfied with the acquisition of many new ideas, strengthened with new enthusiasm, and gladdened with the renewal of old friendships.

Yours very truly

CAMPBELL HARVEY.

* * *

Battle Creek, Michigan

September 22, 1932

Dear Dr. Warnshuis:

Replying to your letter of September 19 last, regarding meeting in Kalamazoo. I feel as I always have that straight section meetings are better. I do not feel that the arrangement in Kalamazoo was as good as straight section meetings would have been; it crowded our work, hurried us and really interfered in our results. Our men were interested in our line of work and only incidentally in the general work. They did not attend the general sessions very well and we had a half day, each day, which could have been devoted very profitably to further work in our section. Without any increase in our program, we could have filled the whole day.

I know that is the sentiment of the Eye, Ear, Nose and Throat Section in general, too, because it has been discussed in our meetings. I think this probably answers your second question.

The arrangement in Kalamazoo was miserable. The placards stating where the E. E. N. T. Section was to be were so inconspicuous that a great many missed them entirely and there was no provision at the hotel to direct anybody. One of our guests

from out of the state had a great deal of difficulty in finding where the section was holding its meeting. All he could get at the hotel was over in this general direction.

I presume you have taken care of the expenses of the guests brought by our section. Our secretary, you know, was absent, and we used a substitute secretary. I personally did not have the time or opportunity to check up on expenses of guests and I tried two or three times to see you but only found you on one occasion during the whole meeting.

The officers for our section are Ray Conner, Chairman, and Ralph B. Fast, Kalamazoo, Secretary.

We had a wonderful attendance in our section, and I don't believe five individuals got up and left before the program was over even though we ran overtime from one to two hours.

Very sincerely,
WILFRID HAUGHEY.

* * *

Detroit, Michigan,
September 29, 1932.

Dear Dr. Warnshuis:

Your letter of a few days ago is at hand and I can heartily recommend the program of events as followed this year. It was certainly my impression that the attendance at both the morning and afternoon sessions was better than I had seen it at any state meeting that I had attended, which after all may have been due to the new plan or the exceedingly central location of the meeting place.

The only difficulty, however, since the morning program should be only three hours in length, was in getting the first meeting under way. If this plan is to be followed, as I should heartily recommend, the local sponsors of the different sections should be particularly impressed with the importance of having the necessary accessories on hand before the time of meeting. In spite of the fact that we were assured the night previous that everything was in readiness, we found, as you know, nothing to work with, and by the time the lantern was finally duly connected and in shape to run, we were almost an hour late.

With best regards, I am

Very sincerely yours,
R. M. McKEAN.

* * *

Benton Harbor, Michigan,
October 6, 1932.

Dear Dr. Warnshuis:

Replying to your letter of September 19th I wish to say that I have just returned from my vacation, which accounts for my tardy acknowledgment of your favor.

Personally, I believe the Section meetings in the mornings and the General meetings in the afternoons are best. This gives the General Practitioner—and it does the Specialists even more good—recognition which is due him.

Another idea which might be worked out to the improvement of our State meetings, which is enthusiastically acclaimed by the members of the American Academy of O & OL to be the prime reason for the success of their annual meetings, is the Morning Conferences program. I would suggest that you study this and inquire how this has worked out, and see if something of this nature might not be done at our State Meetings in all the various Sections.

This being my last letter to you in regard to my official duties, I want to express my pleasure in our happy relationship and becoming better acquainted in this way.

Very sincerely,
H. O. WESTERVELT.

MINUTES OF THE EXECUTIVE COMMITTEE MEETING

At the call of the Chairman the Executive Committee met at the Statler Hotel, Detroit, at 5:30 P. M., October 5, 1932, with the following present:

B. R. Corbus, Chairman
Henry R. Carstens
C. E. Boys
Henry Cook
A. S. Brunk
J. M. Robb, President.
George L. Le Fevre, President-Elect
J. H. Dempster, Editor
F. C. Warnshuis, Secretary
Wm. J. Stapleton, Medico-Legal Committee

1. The Secretary presented a communication from the Grand Rapids Convention Bureau requesting the society to set the dates for the 1933 Annual Meeting and suggested the dates of September 5, 6, 7, and September 12, 13, 14, in order that no other conflicting convention be booked during our Annual Session. Following discussion on motion of Boys-Carstens, the dates of September 12, 13, 14, 1933, were designated for the Annual Meeting.

2. The Secretary informed the Council that the Speaker had appointed the following committee, created by the House of Delegates, on Birth Control:

A. M. Campbell, Chairman, Grand Rapids
George Kamperman, Detroit
Roy T. Morrish, Flint.
John L. Chester, Detroit
W. C. Ellet, Benton Harbor

3. President Robb submitted the following as his committee appointments for the ensuing year:

Legislative Committee:

Earl I. Carr, Chairman, Lansing
Grover Penberthy, Detroit
W. C. McCutcheon, Cassopolis
Wm. A. Hyland, Grand Rapids
Carl F. Moll, Flint

Advisory Committee to the Women's Auxiliary:

T. F. Heavenrich, Chairman, Port Huron
R. E. Loucks, Detroit
F. C. Warnshuis, Grand Rapids

Joint Committee on Public Health Education:

Re-appointment of the present members

Radio Committee:

Wm. J. Stapleton, Jr., Chairman, Detroit
W. A. Manthei, Lake Linden
R. A. Alter, Jackson

Civic and Industrial Relations Committee:

H. S. Collisi, Chairman, Grand Rapids
A. R. McKinney, Saginaw
Harry F. Dibble, Detroit
George Curry, Flint
Edward P. Wilbur, Kalamazoo
K. B. Brucker, Lansing
Phil Riley, Jackson

Upon motion of Cook-Boys, the President's committee appointments were approved.

4. Upon motion of Carstens-Boys, and at the request of the President, action was taken declaring that there shall be established a special committee on Health to be appointed by the President. Its objectives and activities to be as follows:

President Robb is to outline Committee's activities.

5. Following the above action President Robb appointed the following as members of the Health Committee:

L. O. Geib, Chairman, Detroit
C. T. Ekelund, Pontiac
Roy Holmes, Muskegon

Upon motion of Carstens-Cook the appointment of the above committee was confirmed.

6. The Secretary advised that a number of Coun-

ty Societies hold their annual meetings and collect dues in October, November and December for the year 1933; that it was vital that the Council now determine the amount of annual dues for the coming year. After a lengthy discussion, on motion of Boys-Cook, subject to the approval by mail vote of the entire Council, and in view of the fact that because of the expenses that are being incurred by reason of the work of the committee on Survey of Medical and Social Agencies; by reason of the creation of a new committee by the House of Delegates for study on the subject of Birth Control; and further because the coming year will witness the Legislative Committee incurring added committee expenses, that a rebate of \$1.25 be given to each member on the annual dues of \$10.00, which amount is fixed by the Constitution and By-Laws, and that the Secretary be instructed to collect \$8.75 per member for 1933 dues.

7. The Secretary referred two resolutions, adopted by the House of Delegates, providing for amendments to two of the existing Public Acts dealing with the care of indigents. Upon motion of Carstens-Cook, the resolutions were referred to the Legislative Committee with instructions that they exercise their best efforts to secure the amendments referred in the resolutions passed by the House of Delegates.

8. The Secretary also presented the resolution relating to the Hospital and Clinic practice in the state that was passed by the House of Delegates. Upon motion of Boys-Carstens, the Secretary was instructed to suspend action until legal information had been obtained and also an expression of opinion had been secured from the Council on Hospitals and Medical Education of the American Medical Association.

9. The Secretary advised that the budget appropriation of \$3,500 for the expenses of the Committee on Survey of Medical and Social Agencies was exhausted. Upon motion of Cook-Carstens an appropriation of \$600 was made, subject to the approval of the Council, for current expenses up to November 15th.

10. Chairman Corbus announced the appointment of the following Council committees, the Chairmen of which had been elected at the meeting of the Council held in Kalamazoo:

Finance:

Henry R. Carstens, Chairman
Harlen MacMullen
Henry Cook

Publication:

J. D. Bruce, Chairman
J. E. McIntyre
A. S. Brunk

County Societies:

C. E. Boys, Chairman
B. H. Van Leuven
Paul R. Urmston

Upon motion of Boys-Cook, the above appointments were confirmed.

11. The Secretary presented the problem of Journal advertising income. The Editor, Dr. Dempster, participated in the discussion. On motion of Cook-Boys, the Secretary was directed to convey to each member of the Council a request that they present this and other society matters before the county societies of their respective districts before January 1, 1933, and that the Secretary prepare an outline for the Councilors as to subjects that should be presented to the membership in their district.

12. The Chairman of the Medico-Legal Committee presented a detailed outline of the work of the

Committee and the cases that are on hand and the defense activities that were being conducted.

13. There being no further business the Executive Committee adjourned at 10:30 P. M.

F. C. WARNSHUIS, Secretary.

ANNUAL SESSION MINUTES

Considerable space is devoted in this issue to the publication of the minutes of our annual session. They reflect the activities of your society. Read them and so remain informed upon the work that is being carried on for you. Special attention is directed to the addresses of President Moll, President-elect Robb and Dr. Olin West. The Council's annual report presents vital facts. The resolutions adopted should be observed by every member. The newly elected officers are your personal representatives—aid and support them as they contribute time and labor in your behalf.

President Robb will have a message for you in this department each month. These messages will be worth your reading. Comply with his advice and requests.

It is extremely desirable that the coming year be one that will record the most intense and sustained membership activity. As President-elect Le Fevre has said, "the next two years will be hard and trying, with many complex problems arising and through which we will need coöperation and support from every member."

With the right spirit, with unrestrained loyalty, and with unselfish willingness we will go forward to greater and better achievements. You are urged to become sincerely active in your local society.

SCIENTIFIC EXHIBITS

The number of scientific exhibitors in this year's annual meeting of the State Medical Society was unusually small for several reasons: The depression, the fact that some members who exhibited in the past made the excuse that they did not wish to become chronic exhibitors, and the fact that some were busy making preparations for exhibits in other meetings. In spite of these facts there were some exhibits of interesting material representing a lot of effort.

Dr. Vernon L. Hart of the Department of Surgery, University of Michigan, presented a large volume of material on tuberculosis of the hip, using photographs and X-ray transparencies.

Dr. H. C. Mack and Dr. G. H. Agnew of Harper Hospital, Detroit, presented charts, photographs and gross specimens representing the results of a large series of the Asheim-Zondek test for pregnancy.

Drs. George Sewell and Joseph Casper of Herman Kiefer Hospital had an interesting exhibit of kidney tuberculosis, illustrated by excellent gross and microphotographs with gross specimens and using X-ray transparencies.

Dr. Homer Stryker of Kalamazoo presented a very practical apparatus for securing orthopedic traction during fluoroscopic examination and application of casts in fractures of the extremities.

Drs. Claire L. and Floyd Straith of Detroit gave a large exhibit of facial reconstructions showing the use of plastic surgery. This was illustrated by photographs and casts showing the application of various pieces of apparatus.

Drs. L. O. Geib and Henry F. Vaughan presented by chart and photograph material representing medical participation in public health without free clinics.

The W. K. Kellogg Foundation gave a display descriptive of the foundation and its function and policies.

COUNTY SOCIETIES

GRATIOT-ISABELLA-CLARE COUNTY

The September meeting of the Gratiot-Isabella-Clare County Medical Society was held in the Wright Hotel, Alma, Thursday, September 22, with thirteen members and two visitors in attendance.

After dinner President Burt called the meeting to order and the minutes of the previous meeting were read and approved.

After some discussion it was voted to have the Secretary arrange a meeting with the dentists in November and to arrange a program for December suitable for the members and their wives.

Taking up the evening program Dr. M. C. Hubbard showed a boy who had a Colles fracture in which the distal fragment could only be kept in position by flexing the hand at a right angle. He applied plaster to keep in this position and got good results.

Dr. A. D. Hobbs then gave the history and showed a child that had a severe septicemia in April which was treated in the usual way without improvement, until a phage was used, after which improvement was prompt and continuous until recovery was complete.

Dr. L. F. Hyslop then read an instructive paper on the treatment of thermal burns. President Burt announced the paper was open for discussion and many asked Doctor Hyslop questions regarding the details of treatment.

On behalf of the Society Doctor Burt thanked Doctors Hubbard, Hobbs and Hyslop for their contribution to the September program.

Meeting adjourned.

E. M. HIGHFIELD, M.D., *Secretary*.

OAKLAND COUNTY

The regular meeting of the Oakland County Medical Society was held at the Fox and Hound Inn, Bloomfield Center, on October 20. About forty members and guests were present, the occasion being the conferring of honorary membership on Dr. Edmund A. Christian of the Michigan State Hospital at Pontiac. After dinner Dr. F. A. Baker, president of the Society, put the meeting in charge of Dr. H. Furlong, chairman of the program committee, who called upon Dr. Albert Barrett of the University of Michigan Medical School, who reviewed the life work of Dr. Christian. The editor of the Journal of the Michigan State Medical Society in a short address congratulated the honored guest on his half century of noble service. Dr. J. M. Robb, president of the Michigan State Medical Society, tendered Dr. Christian honorary membership in the Michigan State Medical Society, which was embodied in a resolution passed unanimously by the house of delegates of the Society at the Kalamazoo meeting. The chairman then called upon Dr. Baker, president of the Oakland County Medical Society, who conferred honorary membership in the County Society. The certificate of membership was in the form of a *de luxe* folder bound in morocco. Then followed the scientific address of the evening by Dr. Thomas J. Heldt of the Department of Neurology and Psychiatry of the Henry Ford Hospital. Dr. Heldt spoke on the Newer Methods in the Treatment of Dementia Præcox. Dr. Christian in a splendid address thanked the Michigan State Medical

Society for the honor, which he appreciated more than words could tell. He also discussed Dr. Heldt's paper. The meeting closed with an informal reception in which Dr. Christian was the object of esteem and affection of the members and guests.

SAINT CLAIR COUNTY

A regular meeting of Saint Clair County Medical Society was held at Edgewater Inn, Port Huron, Michigan, October 4, 1932.

After a social hour, during which supper was served to seventeen members of the Society and two guests, the meeting was called to order by the President with the following guests: Dr. E. S. Gurdjian and Mr. Merton of Detroit, present; and the following members: Doctor Patterson, LeGalley, Fraser, Ware, DeGurse, McNair, Heavenrich, MacKenzie, Burley, Thomas, Cooper, Derck, Ryerson, N. J. McColl, D. J. McColl, Windham, Battley, Smith and Wellman.

Minutes of the last meeting were read and approved.

Upon motion made by Doctor Battley, supported by Dr. D. J. McColl, the Society voted to appoint a committee to confer with local Parent-Teachers Societies and other organizations and to offer them a list of speakers from the membership of our Society to make health talks during the winter months.

President Patterson then asked that a vote be taken in writing by the members present as to their preference of a meeting place for future meetings of the Society. Dr. T. H. Cooper was requested by the President to act as teller and after balloting the teller announced the result as being in favor of the present meeting place by a vote of twelve to seven.

The Secretary then announced future programs for the balance of the calendar year.

Dr. E. S. Gurdjian of Detroit then presented a series of lantern slides, pausing with each for explanatory remarks upon the general subject of, "Problems on acute traumatic neuro-surgery." The speaker took up, in turn, fractures of the skull with attendant brain lesions, together with appropriate treatment, fractures of the vertebra with cord lesions and treatment, and, in conclusion, section of various peripheral nerves with treatment. Some of the more important points which were brought out by Doctor Gurdjian were (1) that in many depressed fractures of the skull without focal signs no active treatment is necessary, (2) that in skull fractures with a dilation of one pupil, middle meningeal hemorrhage must be ruled out or surgical treatment of that condition undertaken at once, (3) that in skull fracture it is often better judgment to wait for a few hours or longer until the patient recovers from immediate shock before giving surgical treatment, (4) that cases of skull fracture with focal injury often slowly clear up their symptoms of paresis even for weeks, months or even years, (5) that it is better practice not to introduce specula or other instruments into auditory canals following head injuries with hemorrhage therefrom, (6) that in comminuted fractures of the skull the various fragments must not be removed but are to be pressed together and held by suture if at all possible, (7) that roentgenograms of spinal trauma with considerable deformity are often not accompanied by cord injury and, conversely, that those with slight bone injury often may present serious cord lesions, (8) that in trauma to peripheral nerves or where nerve section be suspected, that a careful pre-operative diagnosis be made and recorded, (9) that the time to repair severed peripheral nerves is imme-

diately after section and is to be done with either silk or plain catgut, using six or eight interrupted sutures to bring the neural sheath together, (10) that in old nerve section the fibrous tissue of the nerve ends must needs be removed before nerve anastomosis is done, using a Gillette blade to prepare the nerve ends.

The discussion was opened by Dr. C. F. Thomas, followed by Drs. A. J. MacKenzie, K. B. LeGalley, J. C. S. Battley and others.

After the discussion Doctor Gurdjian closed his subject in the usual manner.

Meeting adjourned at 9:25 P. M.

GEORGE M. KESL, *Secretary-Treasurer*.

WOMAN'S AUXILIARY, MICHIGAN STATE MEDICAL SOCIETY

MRS. F. A. MERCER, President, Pontiac, Mich.
MRS. W. E. McNAMARA, Secretary, Lansing, Mich.

THE SIXTH ANNUAL MEETING

The sixth annual meeting of the Woman's Auxiliary to the Michigan State Medical Society was held at the Kalamazoo Country Club Wednesday, September 14, 1932.

Mrs. Walter den Bleyker as hostess introduced Rev. Dunning, who pronounced the invocation. About one hundred and fifty members and guests were present at the luncheon. Among the guests were: Dr. Carl F. Moll, President of M. S. M. S., of Flint; Dr. Frederick C. Warnshuis, Secretary of State Medical Society, of Grand Rapids; Dr. J. Milton Robb, President-elect, of Detroit; Dr. Louis J. Hirschman, of Detroit. Very interesting addresses were given by each of the doctors.

The President-elect of Kalamazoo Auxiliary—Mrs. MacGregor—gave the address of welcome, which was responded to by Mrs. R. E. Loucks of Detroit.

At three o'clock the annual business meeting was called to order by Mrs. J. E. McIntyre. The Secretary's and Treasurer's annual reports were read and accepted. The report of Standing Committees was called for.

Mrs. Kiefer as state organizer reported three new auxiliaries—Eaton, Kent and Ottawa counties.

The publicity report was given by Mrs. Charles Barone. Hygeia report was given by Mrs. Herbert Heitsch. Legislation report by Mrs. Peterson was read by Mrs. Seybolt of Jackson. Reports of delegates to National convention were read by Mrs. Bainerd of Battle Creek and Mrs. Hartman of Detroit; both were greatly enjoyed.

It was moved by Mrs. Breakey that the recommendations of the Executive Board (to keep the dues of county auxiliaries fifty cents indefinitely) be accepted. Seconded and carried.

The Nominating Committee submitted the following report:

Mrs. F. A. Mercer of Pontiac for President. Mrs. E. L. Whitney of Detroit for Vice President.

Ballots were cast and Mrs. Breakey reported all votes were for Mrs. Mercer and Mrs. Whitney. Mrs. McIntyre thanked the members for their splendid coöperation; also thanked the ladies of Kalamazoo Auxiliary for the hospitality extended to all visiting ladies. Mrs. McIntyre recommended the adoption of Dr. Robb's suggestion for medical intelligence committee.

A vote of thanks was given Mrs. McIntyre for her work as President the past year.

The meeting adjourned.

ALTA B. McNAMARA, *Sec.-Treas.*

REPORT OF LEGISLATIVE COMMITTEE

There has been so little legislation completed this year that we haven't very much to report that is definite. However, the state Legislature, at the last regular session, created a commission to inquire into Medical Practice Acts and Laws, regulating those who deal with the sick. It is my understanding that the Medical Society feel confident that satisfactory future legislative activities may result.

There are several other problems that are confronting the Medical Societies that I think we should be interested in, such as the War Veterans' Relief.

At the 1931 Philadelphia Session of the American Medical Association, Dr. H. H. Shoulders of Tennessee introduced a resolution relating to medical care of War Veterans. This resolution was adopted by the House of Delegates, and a special Committee headed by Dr. Wright of Minnesota was appointed to secure this type of Veterans' Medical Relief. The responsibility of securing the endorsement of the American Legion in each state has been delegated to the State Medical Societies. In Michigan, Dr. Angus McLean of Detroit was selected to head a committee for this purpose.

There are 53 veterans' hospitals, with a capacity of 25,920 beds. The present system of hospitalization is very costly. The law, as it now stands, encourages veterans to stay in hospitals and soldiers' homes even after they are well, and capable of caring for themselves. Disabled veterans may go to the hospital having all expenses paid, and still draw full compensation. As a result, the hospitals are filled to capacity with men that are completely rehabilitated, but have no incentive to go to work. The director of the Veterans' Bureau, General Frank T. Hines, says that in 1931, 52 per cent of the cases in hospitals and 75 per cent of recent admissions were of non-service disabilities, while hundreds of men suffering from a disease or disability acquired during service are unable to gain admittance. Consequently the cry goes up for more hospitals.

The Medical Council of the Veterans' Bureau has estimated that the maximum number of beds needed, under the new ruling, will be 129,825. The average cost of constructing veterans' hospitals is \$3,500 per bed. The cost of maintenance of the above number of beds would be \$200,000,000 per year. These are not all. The cost of equipment and transportation of veterans to and from hospitals cannot be estimated. Dr. Shoulders has suggested an insurance plan of benefits for ex-soldiers that would do away with this proposed building program. His proposition is that the Government issue to each veteran a disability insurance policy with two benefit provisions: (1) a weekly cash benefit payable to the veteran during any period of total disability; (2) the payment of a liberal hospital benefit sufficient to cover hospital expenses during any period of hospitalization. The hospital benefit is in addition to the cash benefit. Under this plan, when a veteran is ill he calls his own physician, selects his own hospital in his own town.

This would be far less expensive to administer, and far less destructive in its effects on the whole system of medical and hospital practice in this country.

At a meeting of the Congress of the Council of the American Medical Society, held in Chicago, in February, 1932, Dr. Ray Lyman Wilbur, Secretary of the Interior, expressed a belief that the Government had built all the hospitals needed.

I am sure that every right-thinking American wants every veteran to have adequate care and protection, but the present plan seems prohibitive.

The American Medical Association at its meeting held in New Orleans in May of this year refused to sponsor a resolution introduced by Dr. J. D. Brook, of Granville, Mich., asking the Medical Association to sponsor birth control legislation. The resolution also requested that the President of the Medical Association appoint a committee to study birth control for twelve months, and report its findings to the Association next year. In the September number of our State Journal you will find an article on the Birth Control Movement, by Dr. George Kamperman of Detroit, that is well worth reading. In this same number of the Journal, you will find where the Executive Committee of the Council directed the Secretary not to lease a booth to any organization furthering the program related to birth control. This was in reference to the Kalamazoo meeting.

The Act for the Promotion of the Welfare and Hygiene of Maternity and Infancy will undoubtedly be coming up again. Let me urge you to keep posted on these different activities so that if the time ever comes when our assistance is required by either County, State or National Society we will be prepared to render same in an adequate and intelligent manner.

Respectfully submitted,

MRS. E. S. PETERSON, *Legislative Chairman.*

MEDICAL HISTORY

Your Society expended \$8,000 for the compilation and publication of a Medical History of Michigan in two volumes. There remain some 400 sets of this history on hand. To dispose of them the Council has reduced the price to \$7.50 per set. Every doctor should own this truly excellent historical set of Michigan's Medical history. It is an appreciated gift to a friend or associate. Why not order a set from the State Secretary today? Payment can be made of \$4.00 with the order and \$3.50 in sixty days. Send your order today and enable the Society to dispose of these remaining sets.

LEGAL DEFENSE

Legal defense is a valuable feature of membership. One suit or threat of suit may cost you anywhere from \$200.00 to \$1,000.00 in attorney fees—an amount equal to your county and state dues for twenty years or even a lifetime. Recently a member lapsed in his dues. Suit against him was started. His attorney fees were \$475.00—sufficient to pay his dues for twenty years. Against another doctor, who had been a member for but six years and whose total dues paid were \$90.00, a suit was started and \$1,180.00 was paid from the defense fund to attorneys who appeared in his behalf. Granted that he lives and practices forty years, he will still have saved \$500.00 and all the while protected as well as participating in the other membership benefits. Society membership is a valuable asset.

When threatened or sued, immediately notify your local society medico-legal representative and Dr. W. J. Stapleton, Chairman, Medico-Legal Committee, David Whitney Building, Detroit. Do not engage an attorney. Do not discuss the case. Remain silent till you receive instructions from Dr. Stapleton. If you are in good membership standing your legal interests will be protected.

THE DOCTORS' LIBRARY

INTERNAL MEDICINE, ITS THEORY AND PRACTICE. Edited by John H. Musser, B.C., M.D., Professor of Medicine, Tulane University. Octavo, 1,316 pp., illustrated. Cloth. Price \$10.00. Lea & Febiger, Philadelphia.

This book is the work of twenty-seven recognized authorities, each covering a subject in which he is especially qualified. This enhances the authoritative value of the volume. The discussion is adequate, timely, clearly informative, covering the latest and most important knowledge of the topic. The result is an excellent text on medicine that will be found most helpful to every practitioner. It should be accorded a cordial reception.

CLINICAL ENDOCRINOLOGY OF THE FEMALE. By Charles Mazer, M.D., F.A.C.S., Assistant Professor of Gynecology and Obstetrics, Graduate School of Medicine, University of Pennsylvania; Gynecologist to Mt. Sinai and Northern Liberties Hospitals, Philadelphia; and Leopold Goldstein, M.D., Demonstrator of Obstetrics, Jefferson Medical College; Assistant Gynecologist to Mt. Sinai Hospital; Formerly Fellow in Gynecologic Research, University of Pennsylvania. 518 pages with 117 illustrations. Philadelphia and London: W. B. Saunders Company, 1932. Cloth, \$6.00.

This book will prove of value as coördinating the subject of endocrinology with gynecology. A great deal of work has been done of recent years in the way of study of the ductless glands so that the time is ripe for a synthesis of findings of research. We have here a chapter on the hormone test for pregnancy with special reference to the Asheim-Zondek test. Among other subjects treated are the hormone of the ovary, the pituitary gland, the thyroid, the adrenals, the parathyroid and the pancreas. There is an interesting discussion of the interrelationship of the endocrine glands which is followed by a clinical evaluation of blood hormone tests. The work contains a valuable index to the literature of the subject in the way of an extensive bibliography.

THE SURGICAL CLINICS OF NORTH AMERICA. (Issued serially, one number every other month.) Volume 12, No. 4 (Mayo Clinic Number—August 1932). Octavo of 227 pages with 79 illustrations. Per clinic year, February, 1932, to December, 1932. Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1932.

BEHIND THE DOOR OF DELUSION. Published by The Macmillan Company, New York.

The author describes himself as "Inmate—Ward 8." In the outside world he is remembered as a brilliant newspaper man, a welcome speaker at luncheon clubs and an active figure in civic affairs. His dipsomania makes him an inmate of the State Hospital. I have just finished reading the book, which I recommend not only to doctors and lawyers but to all who have the welfare of others in mind. As a result of the writer's training he has disentangled the true from the false in the distorted stories told him and woven the whole into a fascinating narrative. On Page 50, "Tobacco is one of the greatest palliatives known for the loneliness of life in an insane ward. If I had a friend in an insane asylum and did not send him tobacco and reading matter I would feel that the Sermon on the Mount had been wasted as far as I was concerned, and the thirteenth chapter of Corinthians could be considered a total loss." His description of various types of inmates, the physicians and nurses is free from exaggeration. The chapter on sterilization will be of interest to all medical men, a book to read and ponder over.

—W. J. S.

OF GENERAL MEDICAL AND SURGICAL INTEREST

CESAREAN UTERINE SUTURES PASSED FROM THE VAGINA

Harry S. Fist, Los Angeles, reports that on Oct. 21, 1931, at the Cedars of Lebanon Hospital, after a test of labor, a low cervical cesarean section was done, because of dystocia due to disproportion, on a primigravida, aged 28, in good general health. Bleeding was profuse, the placenta being located on the anterior aspect of the lower uterine segment. The uterine incision was closed with a first layer of interrupted number 2 chromic catgut sutures, a second layer of continuous number 2 chromic catgut locked sutures to stop hemorrhage from the bleeding venous sinuses, and several interrupted sutures. On the eleventh day, which was the second day with a temperature of 98.6 F., the nurse reported that the patient had passed a large piece of pus from the vagina. Inspection proved this to be a soft mass of yellowish tissue, encircled by the interrupted and continuous uterine sutures; in short, the uterine scar. So many convalescents from cesarean section exhibit unexplained elevations of temperature that ischemia and tearing out of the sutures is probably common, but remains unrecognized. It may even occur when the temperature is normal. At any rate, the sutures are safer if the following precautions are observed: Sutures should include wide bites of tissue. They should be interrupted and loosely tied. Fluidextract of ergot or solution of pituitary should be used in small doses only, with the greatest care. A drain should be used if there is any suspicion of infection. The occurrence reported is rather rare, yet it is possible that in many cesarean cases the line of sutures slough out entirely or in part without coming to observation.—*Journal A. M. A.*

PARENTERAL LIVER THERAPY IN TREAT- MENT OF PERNICIOUS ANEMIA

Maurice B. Strauss and William B. Castle, Boston, have been unable to detect any difference in effect on blood formation between intravenous and intramuscular injection. However, reactions accompanied by chill and fever occurred in about one-third of patients in relapse who received an initial intravenous injection, and in one patient with a history of natural allergy there occurred a severe nonfatal shock following the third intravenous injection at weekly intervals. This was the only alarming reaction among about 200 intravenous injections. However, since the intramuscular method did not produce a systemic reaction from any one of over 2,000 injections in more than 100 patients, the authors abandoned the intravenous route altogether, although occasionally one may prefer the intravenous administration of the material to the intramuscular when large doses must be given. The treatment of the average patient with pernicious anemia in relapse may be accomplished satisfactorily by the daily intramuscular injection of 2 c.c. of liver extract. The extract is a simple water solution of liver extract No. 343 (N. N. R.), now brought without buffer to pH 7.4, filtered and preserved by the addition of triresol. In an emergency, liver extract No. 343 derived from 100 Gm. of liver (the contents of one vial) may be dissolved in 20 c.c. of warm water, filtered, boiled for five minutes and injected with the only disadvantage that the intramuscular injection is

painful, whereas a similar amount of the properly neutralized extract may be injected at one time without excessive discomfort, and from 2 to 5 c.c. will seldom cause any discomfort whatever. Extracts of greater purity have been repeatedly employed, and it has been found that further fractionation or removal of material results in a loss of potent material. Furthermore, if the dry extract (No. 343) derived from 100 Gm. of liver (about 4.5 Gm.) is dissolved in less than 20 c.c. of water, there is reason to believe that the solution is not as effective, probably owing to the failure of all the potent material to enter solution. The question of a maintenance dose cannot be settled at this time. When, in addition to a blood normal in all respects, consideration of all aspects of a case reveals no remediable abnormality, the dose may in certain instances be reduced. In the usual case, two or three injections of 2 c.c. of extract a week, or a single weekly injection of from 5 to 10 c.c., presumably may suffice. However, in the resistant case much more than this amount will be needed. In each case the blood and general condition should be studied at frequent intervals to insure adequacy of treatment. It has been the authors' practice to continue daily injections of at least 2 c.c. of extract in all cases with neurologic manifestations, irrespective of the fact that smaller amounts will maintain the blood at a normal level. How long this dose should be continued remains for the future to decide. The keynote of therapy should be always to give more than "just enough." Intramuscular liver therapy has been found of great benefit in "resistant" cases of pernicious anemia and in cases presenting symptoms due to spinal cord degeneration.—*Journal A. M. A.*

DIAGNOSTIC SIGNIFICANCE OF HEMATEMESIS

According to Andrew B. Rivers and Dwight L. Wilbur, Rochester, Minn., the source of hematemesis may usually be determined with accuracy if data, obtainable through a detailed anamnesis, careful general examination and systematic laboratory data, are carefully evaluated. The most common cause of hematemesis will be found in intrinsic gastric duodenal or jejunal lesions. Peptic ulcer is by far the most common cause of this symptom. It is well to remember that indigestion and hemorrhage usually mean an intrinsic gastro-intestinal lesion. Diseases in which varices are likely to develop are next in importance in the production of hematemesis; they accounted for 5.5 per cent of the 668 cases of the authors' series. Vomiting of blood is a rare complication in blood dyscrasia, and the recognition of such diseases is usually accomplished without much difficulty. Surgical exploration seems the advisable procedure in cases of repeated hemorrhage when there is no evidence of bloody dyscrasia or of hepatic or splenic disease. In practically all such cases the bleeding is explainable on the basis of an intrinsic gastroduodenal lesion.—*Journal A. M. A.*

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CONTENTS

Therapeutic Radiology in Relation to Infancy and Childhood. Arthur U. Desjardins, M.D.	777	The Journal of the Michigan State Medical Society	808
Tumors of the Female Breast. Richard R. Smith, M.D., F.A.C.S.	787	The Committee on the Cost of Medical Care Presents Final Report.	812
Some Critical Remarks on the Recent Literature on Spinal Anesthesia. Frank A. Kelly, M.D.	790	The November Journal.	813
The Treatment of Trichomonas Vaginalis Vaginitis. H. H. Cummings, M.D.	794	Medical Economics:	
The Physical Therapy of the Commoner Skin Diseases. Howard J. Parkhurst, M.D.	796	Medicine in a Changing Age. J. C. S. Bat- tley, M.D.	814
Percutaneous Method of Immunization Against Diphtheria. Edgar E. Martmer, M.D.	801	General News and Announcements.	816
A New Method of Skin Grafting. C. V. Russell, M.D.	804	Deaths	816
Michigan's Department of Health. C. C. Slem- ons, M.D., Dr.P.H.	805	Communications	817
Editorial:		Society Activity	818
The Season's Greetings.	807	County Societies	824
Ray C. Stone, M.D.	808	Woman's Auxiliary	829
		The Doctors' Library.	830
		Of General Medical and Surgical Interest.	831
		Index to Volume XXXI.	833

THERAPEUTIC RADIOLOGY IN RELATION TO INFANCY AND CHILDHOOD*

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Before considering the pathologic conditions of childhood for which treatment with roentgen rays is recognized as valuable, it is essential to explain the peculiar sensitiveness to irradiation of the young, rapidly growing organism of the normal child. It has now been thoroughly established that every variety of cell in the body has a specific range of sensitiveness to roentgen rays and radium. Variation in the susceptibility of different kinds of cells appears to depend mainly on their natural life cycle, on their metabolic activity, and on the stage of mitosis in which the cells happen to be when exposed to the rays. Thus the lymphocytes, the metabolic cycle of which among human

cells is the shortest, are also the most radio-sensitive, and the nerve cells, the life cycle of which is the longest, are also the most resistant to irradiation. This principle applies not only to the human species but also to mammals in general and to many other forms of animal life. Moreover, the significance of the rate of cellular metabolism

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affects not only the sensitiveness of the cells themselves, but also that of the organism as a whole. Thus, the shorter the life period of a species of animal, the more radiosensitive it is likely to be. The degree or rapidity of radiation effect varies with the dose of rays, the age of the animal or human being, and the natural life cycle of the species. The cells and tissues of a given species rapidly become less sensitive as the individual emerges from the early phase of its existence, during which growth is such a prominent feature. Next in importance as a factor governing the radiosensitiveness of cells is their age or, in other words, the stage of metabolism in which they happen to be at the time of irradiation. Cells in process of mitotic division are more readily influenced by a given dose of rays than are cells in the resting stage. Also young, immature cells are more easily affected by exposure to the rays than are adult or mature cells. The notion that pathologic cells are more radiosensitive than normal cells of the same kind, often asserted as a dogma, is valid only to the extent that the rate of mitosis of cells is affected by the pathologic disturbance. The significance of this factor, therefore, is limited to tumors and to processes of which cellular hyperplasia is an important feature. Such influence is small as compared with the specific natural susceptibility of each variety of cell and with the age or metabolic status of the cells.

When, according to their radiosensitiveness, certain cells or groups of cells are exposed to a sufficient dose of roentgen rays or radium, the first perceptible effect is an alteration of or series of changes in the nuclear portion, or genetic mechanism, of the cells. These changes are characterized collectively by arrest of mitotic division and by partial or complete degeneration of the cells, and individually by disorganization and fragmentation of the nuclear chromatin, vacuolar degeneration of the protoplasm, rupture of the cell and scattering of the fragments of chromatin from the nucleus among the remaining intact cells. The chromatin debris is then gradually absorbed by phagocytes (phagocytic reticular cells or macrophages), while the liquid portion of the degenerated cells, together with the ferments and antibodies which they previously contained, are liberated, become mixed with

the tissue fluids and ultimately find their way into the blood.

The reaction of different varieties of cells is characterized by certain similarities and dissimilarities. On all cells a sufficient dose of rays first causes partial or complete degeneration and fragmentation of the nuclear chromatin, with arrest of mitosis, and vacuolar degeneration and liquefaction of the protoplasm. After smaller doses, however, the cellular effects may vary in degree from the slightest grade of degeneration and inhibition of mitosis to complete destruction; the variations in effect depending on the kind of cell, the age of the cell or the stage of metabolism of different cells of the same kind, and the precise dose of rays in relation to the susceptibility of a particular variety of cell. Other factors, such as the circulation supplying the cells, also may influence their susceptibility to a variable extent. To illustrate the dissimilarities in reaction between different kinds of cells, I need only describe briefly the peculiarities of reaction of a few varieties. For example, the lymphocytes in the spleen, lymph nodes, circulating blood, bone-marrow, and thymus gland, which among human cells are known to be the most sensitive to irradiation, and other leukocytes (polymorphonuclears and eosinophiles) which, though less sensitive than the lymphocytes, are more vulnerable than most other cells, either undergo temporary inhibition of metabolism or are totally destroyed even by a moderate dose of rays. Epithelial cells which have the property of secreting mucus undergo mucoid degeneration and secrete an increased quantity of mucus for a short time, but later the quantity of mucus secreted is abnormally small; in fact, the output of mucus may cease altogether for a time, but later some measure of cellular regeneration and functional restoration may occur. When subjected to a sufficient dose of rays, epithelial cells in the skin or lining the gastro-intestinal tract, the respiratory tract, the tubules of the kidney or the tubular glands generally, desquamate into the lumen of the respective organ or structure and later are replaced by regenerative hyperplasia of adjacent intact cells; or, if the proportion of destroyed cells is too great for hyperplastic regeneration, the breach is repaired by proliferation of connective tissue. When blood vessels are exposed to sufficiently strong

irradiation, some of the endothelial cells swell and desquamate into the lumen of the vessel and are carried away by the blood. As a result of such endothelial desquamation or as another step in the reaction of the irradiated vessel wall, the cells of the media also swell, and this layer of cells may thicken greatly. Later, the desquamated endothelium is replaced by newly formed cells, but the inflammatory reaction of the media may lead to proliferation of connective tissue cells, which causes the walls of the vessel to become thicker and thicker, and sometimes the lumen is thus completely obliterated. The spermatogonial epithelium of the testis and the follicular epithelium of the ovary also are peculiarly sensitive to irradiation. Within a few days after exposure, these cells begin to degenerate and to desquamate into the lumen of the tubules. This leads to failure of the cells to mature and the result may be complete azoöspemia or amenorrhea. In the testis the cells of Sertoli are not affected for a time, but later they proliferate and apparently play a part in regeneration of the spermatogonial epithelium. These are but a few examples of similarity and dissimilarity in cellular reaction.

In no way can the cellular degeneration induced by exposure to roentgen rays or radium be regarded as specific in the sense that such degeneration assumes a form peculiar to these radioactive substances. Each variety of cell degenerates in a certain way regardless of the chemical substance or of the kind of physical energy to which they may have been exposed. While this is true of individual cells, it does not mean that the action of radiation on tissues is precisely the same as the action of sulphuric acid, for instance. Just as an experienced pathologist can distinguish the effect of strong acids on the mucosa of the esophagus and stomach from the effect of other chemical substances, so can the experienced radiologist and pathologist usually identify tissue changes caused by irradiation. The points of identity by which such changes can be recognized do not concern the reaction of individual cells so much as they do that of different kinds of tissue in relation to the quality and quantity of radiation and the exact method of irradiation.

As one would expect, therefore, the radiosensitiveness of different tissues varies

according to the susceptibility of the cells of which they are chiefly composed. Thus, organs or structures made up mainly of lymphoid cells are extremely sensitive and are affected to a considerable degree, even by small doses of roentgen rays or radium. Next in order of susceptibility come the salivary glands, the testis and ovary, the basal epithelium of mucous membranes and skin, the epithelium of the respiratory tract, the endothelium of the blood vessels, pleura and peritoneum, connective tissue, muscle, bone, and finally adipose and nerve tissue.

As already mentioned, age plays an important part in the vulnerability of cells and tissues. During fetal life as well as during the early part of postnatal life, the growth of a part or of the body as a whole may be easily retarded or stopped altogether by exposure to roentgen rays or radium. During pregnancy, irradiation of the part of the abdomen corresponding to the gravid uterus may cause the fetus to die and to be expelled or may merely retard its growth as a whole or in part, depending on whether the entire fetus or only certain parts are exposed to a large, moderate, or small dose of rays. If, for instance, the head of the fetus is exposed to a sufficient dose, the growth of the cranial bones and, secondarily, that of the brain itself may be retarded more or less. This applies only to therapeutic doses of the order of those commonly employed in treating tumors. Some retardation of growth may follow smaller doses, but in such cases the influence on growth may be so slight as to be imperceptible. The relatively small doses of rays used in connection with diagnostic roentgenology should not have any appreciable effect unless roentgenography or roentgenoscopy is repeated too many times within a short period. After birth, the influence on growth is greatest during the first few years, after which such influence diminishes rapidly, until the sensitiveness of the specific cells of the various tissues and organs becomes as stabilized as that of corresponding mature cells. Thus, in a child one year old, the growth of bones and muscles can be slightly or greatly retarded by a dose of rays that would have no effect on the fully developed structures of an adult. But since even the mature bones and muscles of an adult human being can be devitalized by sufficiently intense irradiation, it becomes evident that, in subjecting a child to

roentgen rays or radium for any benign or malignant condition, the dose of rays must be adjusted with relation to the age of the patient. Until the body has attained its full development, the possibility of interfering with growth must be borne in mind, especially in connection with certain pathologic processes which, although amenable to radiotherapy, may require intense irradiation over a considerable area. Of course, when the problem involves the life of the patient or when treatment with roentgen rays or radium is likely to yield results that cannot be obtained by any other method, possible interference with growth may be disregarded to some extent. In daily practice, fortunately, the problem seldom assumes major proportions, and the possible danger can generally be obviated by suitable adjustment of dosage. Before birth and during the first year of life, the crystalline lens of the eye is extremely sensitive to irradiation, and degeneration of the lenticular epithelium and fibers (cataract) may be induced by direct exposure to a dose of rays which, ten or even five years later, would not have any deleterious effect whatever. The mature lens of the adult eye can tolerate irradiation insufficient to cause inflammatory reaction of the conjunctiva, but a dose large enough to induce conjunctivitis may, from several months to several years later, lead to cataract. In children this dangerous possibility bears an inverse relation to age; the younger the child, the greater the danger from a given dose. The skin of adults varies in susceptibility according to the complexion of the individual (quantity of pigment) and according to the thickness of the skin of different parts of the body. In children these factors apply with even greater force. This is probably due to greater circulatory or general metabolic activity. In any event, in irradiating the skin of a child aged ten years the quantitative dose permissible for an adult (same region) should be reduced approximately 10 per cent, and for a child five years old, approximately 15 per cent. An even greater reduction should be made when the same territory must be exposed to the rays repeatedly. Otherwise, cutaneous atrophy, late telangiectasis, or radiodermatitis may ensue.

SKIN DISEASES

Eczema, dermatitis and ringworm. Many

of the diseases which affect the mature body of adult human beings are also encountered during infancy and childhood, but the child may be more prone to certain conditions than the adult or, during childhood, certain pathologic disturbances may exhibit peculiarities which are less common in mature life. For example, certain forms of eczema and other skin diseases are more common among children than among adults. As in the adult, eczema of children is amenable to radiotherapy, but since, in the former, experience and minute attention to details are indispensable for best results, these essentials are even more important in dealing with similar conditions among children. Many forms of dermatitis also can be most effectively treated in this way. Roentgen rays should not be employed during the acute stage, when the cutaneous manifestations should preferably be dealt with by means of topical applications. This is especially true during infancy, when the child may be quite restless from itching and interference with sleep. For infants or young children who are restless or difficult to control, topical applications often may have to be relied on exclusively. Satisfactory irradiation may be impossible or actually dangerous. After the acute stage has subsided, roentgen-ray treatment may be used to advantage. Small doses, repeated at short intervals, are preferable to large doses at longer intervals, and the total dose given during any period of three weeks should always be less than the quantity of rays required to induce erythema of the skin. One method commonly employed is to divide the so-called erythema dose into five parts and to give one-fifth of this dose once a week. A point that needs emphasis is that exposure to roentgen rays must not be repeated too many times. If exposure to one-fifth of an erythema dose weekly for from twelve to sixteen weeks has not yielded substantial improvement or has not effected a cure, irradiation should be discontinued permanently or for a long time. Ringworm of the scalp responds well to roentgen irradiation; in this condition also, providing experience guides the treatment and the dose is adjusted so as to induce temporary but not permanent alopecia, excellent results may be obtained. In fact, roentgen-ray treatment has become the most effective means of curing the disease. Success requires not only

careful adjustment of the dose to induce certain but only temporary depilation, but the quantity of rays reaching every part of the scalp must be regulated so as to have a uniform effect.

Angioma. In certain kinds of angioma of the skin treatment with roentgen rays or radium may have a strikingly favorable action. Whereas in that variety of angioma commonly designated as port-wine mark radiotherapy may be said to be quite ineffective, in other varieties such as the strawberry and cavernous forms of angioma, on the contrary, marked benefit or improvement may attend judicious exposure to the rays. Usually radium (beta rays) is most effective in the former condition, and many such lesions can be completely cured. The younger the child, the greater the care required. A moderate dose of radium, essentially unfiltered or filtered through 0.1 mm. of aluminum, in the form of a plaque (5 milligrams), should be applied over different parts of the lesion at relatively long intervals. The younger the child, the smaller should be the quantity of radiation; still, the dose must be sufficient to have a definite effect. When the lesion is small, one or two applications may be sufficient to eradicate it completely, but when large, the treatment may have to be repeated several times at intervals of from one to three months. The aim should be to cause the lesion to disappear without undesirable changes in the skin. In the cavernous type of angioma also, radium or roentgen-ray treatment may yield astonishingly good results. When the lesion is superficial, radium in the form of a plaque, filtered through 0.1 mm. of aluminum, is preferable to roentgen rays, but when the lesion is thick and extends beneath the skin or mucous membrane, roentgen irradiation is most advantageous. When roentgen rays are employed, they should be of a medium range of wave-length and should be filtered through 3 or 4 mm. of aluminum. In either case, the dose should be slightly less than that required to cause inflammatory reaction of the skin.

Both radium and roentgen rays act on some of the leukocytes circulating within the aberrant vessels, causing them to disintegrate, and on the young, actively proliferating endothelial cells of the newly formed vessels, causing these cells to degenerate and desquamate. The platelets

also are affected, and they and the degenerating leukocytes and endothelial cells tend to form clumps which apparently serve as a nucleus for thrombosis. At any rate thrombosis occurs. As a result of endothelial degeneration, blood or serum may seep through the injured walls of the vessels, the media of which also undergoes inflammatory thickening. As the immediate reaction subsides, these changes are followed by proliferation of fibroblasts and gradual diminution of caliber, and finally by complete obliteration, of the vessels.

Warts. The common variety of wart is distinctly amenable to irradiation, either with roentgen rays or radium. A large proportion of such lesions can be successfully and completely eradicated in this way. When the wart is relatively small and not too thick, perhaps the best method is to surround it with heavy lead foil by causing it to protrude entirely through a hole in the foil which, alone or in conjunction with sheets of lead rubber, serves to shield the surrounding normal skin. One or more erythema doses at one sitting may be sufficient, and the wart may disappear in from three to eight weeks. If, within four weeks, the lesion diminishes in size but does not disappear, it is sound practice to repeat the same dose, but further irradiation should be withheld for at least eight weeks. If three exposures to full doses have not been sufficient to induce complete regression, radiotherapy should be given up in favor of some other method. When the lesions are multiple, several may be included in the same field of irradiation, provided they are not too widely scattered and are situated on a relatively flat surface; otherwise, each wart should be treated separately. Sometimes a large number of small warts in the skin of the neck, thorax or other region may be included in a single field. In this case, a suberythema dose should be used; otherwise, much unnecessary discomfort and, possibly, late telangiectasis and other undesirable effects may ensue.

Keloid. The proportion of young, actively proliferating connective tissue cells undoubtedly explains the effectiveness of roentgen rays or radium against lesions of this kind. When the lesions are small a moderate dose of radium, and when they are extensive a corresponding dose of roentgen rays, should be repeated at intervals of three weeks until

the keloid formation has completely receded or until maximal recession has been obtained. The results depend on the duration of the process in relation to treatment and the thoroughness of the treatment itself. In some cases, especially when the condition has existed for more than one year and the effect of irradiation, therefore, is likely to be slow and incomplete, surgical excision, followed by two or three exposures to roentgen rays at suitable intervals, may save considerable time.

INFLAMMATORY CONDITIONS

Furuncle and abscess. In children as in adults, localized pyogenic infection of the skin or subcutaneous tissues often responds quite well to irradiation. If exposed early, during the infiltrative stage, many acute lesions never suppurate but undergo rapid resolution. Notable features are that pain often abates within a few hours and that a single exposure is usually sufficient. Irradiation during the suppurative stage hastens suppuration and, therefore, may tend to increase pain for a short time. The pain then diminishes as in lesions irradiated during the infiltrative stage. In some cases the influence of the treatment may be only partial; in this event an additional exposure, six days after the first, is indicated. Subacute lesions also are amenable to irradiation, but the treatment may have to be repeated two or three times at intervals of from six to twelve days. Many forms of chronic infection react favorably to roentgen rays or radium, but usually the lesions must be irradiated at intervals for some time. For the acute lesions a dose varying between 20 per cent and 50 per cent of the skin erythema dose, according to the thickness of the inflamed tissues, seems to yield the best results. It is generally best to expose, not only the visible part of the lesion but a wide margin of apparently normal surrounding tissue. The choice between roentgen rays and radium, when both agents are available, depends chiefly on the age of the child. Radium is preferable for infants and restless children, especially when the infection is accompanied by fever. Otherwise, roentgen rays are advisable, because the necessary exposure is shorter, a uniform dose can be delivered to a larger territory, and the cost is smaller. Roentgen rays of medium wave-

length, filtered through 4 mm. or 6 mm. of aluminum, are sufficient for the purpose.

Erysipelas. As in adults, erysipelas in children aged between ten and twenty years often reacts favorably to roentgen rays, but for some reason which is still obscure, when the disease attacks children aged less than ten years irradiation is not so effective. Treatment is most likely to be effective when it is started early in the course of the disease. Not only should the visible lesions be irradiated, but also a wide zone of apparently normal tissue surrounding them.

Tonsillitis and hyperplasia of the tonsil. Hyperplastic enlargement of the tonsil and of other aggregations of lymphoid tissue around the pharynx and nasopharynx, with or without simple or purulent inflammation, is extremely common during childhood. When lymphoid hyperplasia is not accompanied by evidence of purulent inflammation, exposure of the tonsil and pharynx to a moderate dose of roentgen rays two or three times at intervals of three weeks may be counted on to inhibit the tendency to hyperplasia and to cause the enlarged lymphoid structures to diminish in size. The rapidity of recession depends on the relative proportion of hyperplasia of the round cells (lymphocytes) and proliferation of the connective tissue cells. When, as is usually the case, the former element predominates, the reduction in size of the lymphoid structures is quite rapid, but when active proliferation of connective tissue cells is in progress, the lymphoid regression is slower and not so marked. Also, when acute purulent infection has developed, exposure to a small dose of roentgen rays (20 per cent to 30 per cent of an erythema dose of rays of medium wave-length) during the first forty-eight hours (stage of leukocytic infiltration) may, in about 70 per cent of cases, have a marked resolving action or may actually abort the inflammatory process. Irradiation at a later stage may hasten suppuration, may make incision imperative sooner than would otherwise be necessary, and may shorten the period of disability. Even when successful, however, radiotherapy does not insure the patient against subsequent attacks. When a child has suffered repeatedly from tonsillitis, surgical removal of the tonsils should be the therapeutic method of choice. In connection with irradiation of the tonsil and pharynx, one point should be borne in mind. The

beam of rays directed through the lower part of the face and upper part of the neck from each side must pass through the parotid gland. Owing to the radiosensitivity of the mucus-secreting epithelial cells of the salivary glands, exposure to roentgen rays or radium is likely to be followed by swelling in this region. The patient and the attending physician may think that mumps is developing and may be worried by this apparent complication. But they need not be concerned; the swelling is only transient, subsides spontaneously within from twelve to seventy-two hours, and may be wholly or largely controlled by the application of an ice bag.

Lymphadenitis, simple. What has been written concerning furuncle and abscess applies equally to simple inflammation of lymph nodes, but since, in such cases, the adenitis is usually secondary to an adjacent or distant lesion, this also must be dealt with by irradiation or by such other methods as may be indicated.

The remarkable resolving action of small doses of rays on many acute inflammatory processes appears to be related to the degree of leukocytic infiltration. The rate at which such lesions subside after irradiation corresponds so closely to the known radiosensitivity of normal lymphocytes and polymorphonuclear corpuscles that it can hardly be regarded as a coincidence. What probably takes place is that the rays destroy a certain proportion of the infiltrating cells and that the antibodies and ferments elaborated by these cells are liberated and thus can act more effectively against the bacteria than when they were in the intact cells. At least, some such process appears to be the main effect of exposure to the rays. Needless to say, when inflammatory exudates have become partly or completely organized, the influence of irradiation is correspondingly diminished.

Lymphadenitis, tuberculous. Without sacrifice of conservatism, it may be said that radiotherapy is the method of choice for this condition. By this I do not pretend that always and in all cases, regardless of circumstances, roentgen rays or radium should be employed to the exclusion of other therapeutic measures. Inasmuch as tuberculous invasion of lymph nodes, whether in the neck, mediastinum or other regions, not infrequently complicates pulmonary tubercu-

losis, the primary focus, when such exists, must receive adequate therapeutic consideration. In most cases, however, this does not prevent simultaneous treatment of secondarily infected nodes. Surgical incision and drainage may sometimes be advisable, but this measure should be adopted for definite reasons or as a last resort. Fortunately, it is not necessary in most cases. Excision of tuberculous nodes should never be done until other methods of treatment have had a thorough trial, without success.

In a large proportion of cases, suberythmal doses (70 per cent to 90 per cent of the skin erythema dose) of roentgen rays of medium wave length, filtered through 4 mm. of aluminum when the neck, axilla or groin are concerned, and through 6 mm. of aluminum when treatment is directed against tuberculous nodes in the mediastinum, should be repeated at intervals of four weeks until the inflammatory process has subsided and the nodes either have disappeared or have retrogressed to the maximal degree. The treatment may have to be continued for from three to twelve months, or even longer. Periodic roentgen irradiation of the affected region may usefully be supplemented by daily exposure of the entire body to gradually increasing doses of ultra-violet rays. If some of the nodes have undergone caseation or suppuration and rupture threatens, irradiation should be preceded by withdrawal of the caseous or purulent material by means of a needle with a large bore, which should be inserted not through the thin skin overlying the fluctuant area, but to one side through more nearly normal tissue. In this way the danger of causing the formation of a sinus is obviated.

The reason that, in tuberculous adenitis as in many other varieties of chronic inflammation, irradiation must be repeated many times appears to be related to the fact that the lesions are made up partly of infiltrating leukocytes (especially lymphocytes), caseous, purulent, or other material derived from degenerated cells, fibrous connective tissue, and sometimes of calcium in varying proportions. Calcium is not influenced by irradiation; neither is caseous nor purulent material. Connective tissue is relatively resistant to the rays and is not affected appreciably by ordinary therapeutic doses. But lymphocytes are the most radiosensitive of all cells. Hence, the degree of lymphocytic

infiltration, on the one hand, and the proportion of connective tissue and of degenerative products, on the other hand, would seem to be the main factors influencing irradiation in opposite directions. This probably accounts for the more rapid regression of tuberculous nodes during the infiltrative phase. It has often been observed that when fresh tuberculous adenitis supervenes after surgical excision of previously infected nodes, radiotherapy is not so effective or may have to be continued for a longer time. This is generally attributable to increased proliferation of connective tissue and to disturbance of anatomic relations.

Hyperplasia of the thymus gland. For many years obstructive dyspnea and respiratory stridor of infants and young children have been associated, in the mind of physicians, with hyperplastic enlargement of the thymus gland, and many unaccountably sudden deaths have been related to a so-called thymico-lymphatic state, of which an abnormally large thymus gland has been regarded as an essential accompaniment. The respiratory difficulty has generally been attributed to mechanical pressure of the enlarged gland on the trachea, in spite of the fact that, at necropsy, evidence of such pressure has seldom been obtained. More recently, many specialists in diseases of children have found that the respiratory and other symptoms appear to be related to nutritional or toxic factors, and that correction or elimination of such factors has been followed by improvement or cure. Experiences of this kind have now become so common that some physicians boldly assert that the thymus gland has nothing to do with the symptoms. Even if the respiratory difficulty is directly related to the increased size of the gland, it does not necessarily follow that the dyspnea and stridor must be due to pressure on the trachea. Otherwise, signs of pressure at necropsy should be found more frequently. The common absence of such signs is noteworthy and leads one to think that, if the symptoms are ever caused by mechanical pressure, the pressure is more likely to be exerted on the great vessels above the heart. It is hard to conceive how a relatively soft structure such as the thymus gland, even when it has undergone marked hyperplasia, could possibly exert on the comparatively resistant trachea a degree of pressure sufficient seriously to interfere with respiration.

If pressure there must be, it would seem more logical to assume that this affects the great vessels, especially the superior vena cava and possibly, in some cases, the pulmonary vessels. If a doubtful action on the pulmonary vessels is eliminated from consideration, respiratory embarrassment would then be indirect and would probably result from accumulation in the blood of toxic products of metabolism. It is also possible, of course, that thymic hyperplasia may be an effect of nutritional or toxic phenomena, at least at the beginning and perhaps throughout the course of the disturbance.

Whatever may be the essential etiologic factor, reduction in size of the thymus gland by irradiation of the mediastinal region is often followed by improvement in or disappearance of the symptoms. So rapid is the reduction in size of a hyperplastic thymus gland after exposure to a moderate dose of roentgen rays or radium that, by itself, such recession constitutes a valuable diagnostic sign that can be relied on to distinguish thymic hyperplasia from any other variety of mediastinal tumefaction, except Hodgkin's disease and lymphatic leukemia. But the reduction in size of the gland and improvement in the condition of the patient, noted in many cases after irradiation, do not necessarily prove that the symptoms were a direct result of thymic hyperplasia. The hyperplastic process in the thymus gland and lymphoid structures, as well as the clinical manifestations, may be secondary to some obscure cause or causes. Therefore, irradiation of the thymus gland, even when the organ appears abnormally large, should not be undertaken indiscriminately, and any effect produced by exposure to the rays cannot be held out as proof of a direct relation between the symptoms and the increased size of the gland. In many cases equivalent results may be obtained without recourse to roentgen rays or radium. The fact that, so frequently, improvement or cure can be obtained without irradiating the patient also suggests the possibility that the favorable influence of the rays, when they are used, may occur, not by release of the respiratory passages or great vessels from mechanical pressure, but through an autogenous protein effect or through increase of circulating antibodies resulting from destruction of lymphoid cells in the thymus gland itself as well as in the mediastinal lymph nodes and by the

influx into the circulation of the liberated products of cellular autolysis.

The exceptional radiosensitiveness of the thymus gland is due to the susceptibility to irradiation of the small round cells which so largely fill the thymic lobules. The vulnerability of these cells corresponds closely to that of lymphocytes, whether in the spleen, lymph nodes, intestinal lymph follicles, circulating blood, bone marrow, or any other aggregation of lymphoid cells, and this point strongly substantiates the view of certain histologists who, like Hammer, regard the small round cells of the thymus gland as lymphocytes.

The region of the thorax (anterior aspect) corresponding to the thymus may be irradiated with roentgen rays or with radium, the choice depending on the severity of the symptoms, the possible danger of moving the child, the size of the gland as determined by roentgenoscopy and roentgenography, and the availability of each agent. When the symptoms are severe, it is unwise to attempt to move the child for exposure to roentgen rays, either from the home to the hospital or even from one part of the hospital to another; the less the child is disturbed the better. Under such circumstances, radium is preferable, because it can be applied to the child in bed with minimal disturbance. The fact that thymic hyperplasia is so frequently associated with general hyperplasia of the lymphoid structures (the so-called thymicolymphatic state) and that sudden death is a relatively common occurrence must always be borne in mind. The patient should always be given the benefit of the doubt, when doubt exists. When the symptoms are not so severe and extreme care is not so imperative, roentgen rays are preferable, even when the gland has assumed considerable dimensions. Also, when radium is not available, roentgen rays are an invaluable substitute. Regardless of the agent employed, however, the dose should never be large. With the tolerance of the human skin to roentgen rays or to a given quantity of radium as a criterion, the dose should not exceed two-thirds or three-fourths of the so-called erythema dose. In infants, even one-half the erythema dose is sufficient. But regardless of the degree of improvement that may ensue, the gland should be irradiated again after an interval of two or three weeks; otherwise, the symptoms may

return. Two such exposures to roentgen rays generated at approximately 135 peak kilovolts, and filtered through 4 mm. aluminum, should permanently inhibit thymic hyperplasia.

Whooping cough. Some years ago, it seemed as if roentgen rays had a favorable action on some phases of this disease, notably on the paroxysms and on the mediastinal lymphadenopathy which was supposed to be frequently associated with or actually responsible for many of the symptoms. At least, such was the claim advanced by Leonard and supported by Bowditch and many others. For a time, the effectiveness of irradiation was corroborated by many of those who tried the treatment, but in 1924 the work of Faber and Struble cast a shadow of doubt over the entire question and made it appear that roentgen rays have little, if any, actual influence. At the present time, it may be said that the value of roentgen irradiation in whooping cough is uncertain, and this uncertainty will probably not be removed until the etiologic basis of the condition has been clarified.

LYMPHOBLASTOMA

Leukemia. When it occurs during the first decade of life, this condition tends to assume an acute form and its course tends to be short. In some cases radiotherapy may be useful for a short time, but in the majority such treatment seldom yields appreciable benefit. Moreover, unless given with great care so as to minimize systemic reaction, exposure to roentgen rays or radium may lead to undesirable complications and may actually shorten the patient's life. During the second decade, the disease usually is not so acute and radiotherapy may be more useful. Even during this period, however, the treatment should be given slowly and the behavior of the blood corpuscles should be watched closely. In all cases a small dose (less than half an erythema dose) should be given to each area treated, and the number of such areas should be as small as possible. Intense irradiation has no place in the treatment of leukemia of children of any age.

Hodgkin's disease. Relatively common in the third and fourth decades of life, this condition is not infrequently encountered during the second decade, but it is seldom seen among children aged less than ten

years. Radiotherapy is the only method of treatment that can be said to exert a substantial influence on the condition. Although the course of the disease varies considerably in different patients, the radiosensitiveness of the lymphadenopathic masses is such that irradiation provides a ready and reliable means of distinguishing this variety of lymphoid hyperplasia from tuberculous adenitis and other conditions with which it might be confused. In Hodgkin's disease, the enlarged lymph nodes recede rapidly after irradiation, while in tuberculous adenitis the recession of the nodes is quite slow. Exposure to roentgen rays or radium may also be useful in differentiating mediastinal lymphadenopathy incidental to Hodgkin's disease from other tumors of the mediastinum. In the case of the former, the mass of enlarged nodes may diminish in size from 20 per cent to 100 per cent in from a few days to two or three weeks. So rapid and characteristic is the regression that its absence indicates with practical certainty that the mediastinal mass is not essentially lymphoid in character. Also, too rapid regression after ordinary irradiation may give valuable prognostic indications by showing that the disease is comparatively acute, that the lymphoid system is exceptionally unstable, and that death within a few months is certain.

In every case the state of the lymphoid structures and the extent of involvement should be thoroughly investigated by systematic physical and roentgenologic examinations. Sometimes, indeed usually, the disease begins in the cervical region and thus implies chronic infection around the tonsils, nasal accessory sinuses, nasopharynx or teeth. In some cases the first symptoms are abdominal, the first nodes to enlarge perceptibly are the inguinal, and the gastrointestinal tract appears to have been primarily implicated. Surgical verification of such implication is not rare. Itching, fever, or both usually indicate involvement of the abdominal nodes (retroperitoneal, para-aortic, mesenteric or biliary). Thorough irradiation of the abdomen generally can be relied on to cause pruritus, with or without toxic lesions of the skin, to diminish or disappear. Fever also tends to abate, but in some cases it does not disappear completely or for any length of time. In any event, roentgen rays alone or roentgen rays com-

bined with radium should be applied to all regions in which the lymph nodes are palpably enlarged or in which roentgenologic or circumstantial evidence of lymphadenopathy is strong. The dose to each area treated should never be large, and sufficient time for treatment should be taken to avoid pronounced systemic reaction. Unless excessive, leukopenia or anemia does not contra-indicate irradiation; on the contrary, it is a formal indication. In the majority of cases, when a large part of the body must be irradiated, roentgen rays of medium wave length, filtered through 4 mm. or 6 mm. of aluminum are preferable to rays of shorter wave length. Usually, the treatment should be repeated from two to four times at intervals of three to four weeks. Subsequently, the patient should be examined periodically (intervals of three months) and further treatment given from time to time as may be necessary. The condition of many patients may thus be greatly improved, and some may be kept well for months or for several years. As a rule, however, Hodgkin's disease during childhood is not conducive to long life.

TUMORS

Benign tumors. Among children the only benign neoplasm (in most cases it is not a true neoplasm) that is amenable to radiotherapy is the so-called benign giant-cell tumor of bone. Formerly, amputation was regarded as imperative, but during recent years the surgical procedure most in vogue has been to curet the interior of the lesion and to swab the wall of the resulting cavity with some powerful chemical agent. At the present time, such operations are no longer essential in most cases, because it has been found that pathologic processes of this kind are distinctly radiosensitive and can be effectively cured without operation. Two or three weeks after irradiation, the tumor in some cases may become painful, may swell, and the pain and swelling may be accompanied by reddening of the overlying skin. Unless forewarned, the patient, the relatives and even the attending physician, may infer that the rays have incited the tumor to more active growth, and the limb may be needlessly sacrificed. Such inflammation is only a transient phase of reaction and subsides spontaneously in two or three weeks, after

which new osseous tissue is slowly deposited and in time the growth is replaced by solid bone. The reparative phase may require from six months to two years. Surgical treatment may now be restricted to the small proportion of cases in which malignant transformation of the growth occurs, and to cases in which special indications make surgical measures advisable.

Malignant tumors. In general it may be said that the younger the child, the worse the prognosis when it is attacked by any malignant process. Still, certain varieties of neoplasm are radiosensitive to varying degrees. Thus, in the diffuse endothelioma (Ewing) or endothelial myeloma (Kolodny) of bone, adequate irradiation is followed by rapid and sometimes by complete and permanent regression. So characteristic is the rate of regression of such tumors that it serves to distinguish them from all other neoplasms which affect the bones. In many cases, unfortunately, an excellent immediate result is spoiled by distant metastasis. The metastatic deposits also are readily influenced by the rays; if metastasis is confined to a single region prolonged improvement or cure may still be possible, but when the malignant cells have been disseminated to several different regions, permanent cure is out of the question.

Chondrosarcoma of bone is moderately sensitive to irradiation, and considerable im-

provement may follow thorough treatment, but permanent cure is rare. True osteogenic sarcoma can hardly be said to be radiosensitive. On the contrary, it must be classed among the most resistant of tumors. Appreciable, temporary benefit may sometimes follow intense irradiation, but prolonged improvement or cure is rare indeed. Few cases of complete and permanent regression of such neoplasms have ever been reported, and their authenticity has not been absolutely established.

Among the tumors that are occasionally encountered in children is the so-called Wilms tumor of the kidney. Radiosensitive to a limited degree, such growths can often be made to recede perceptibly in a relatively short time, but I have never seen one disappear completely or permanently. Among children epithelial tumors are decidedly uncommon, but when they occur the prognosis is decidedly unfavorable. Limited, temporary regression may be induced by exposure to roentgen rays, to radium or to both agents combined, but a real cure is practically unheard of. Although complete and permanent disappearance of the less radiosensitive varieties of tumor is usually out of the question, sufficient regression for weeks or months may sometimes make treatment worth while as a means of relieving symptoms and of delaying the fatal outcome.

TUMORS OF THE FEMALE BREAST*

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Any one making any sort of an extensive review of the literature of pathological conditions of the breast is apt to become very much confused and bewildered by the nomenclature. Different terms are used to describe identical conditions and each of these pathological conditions as it divides itself into variations is apt to assume a new name. The origin of these various pathological conditions is oftentimes left unexplained or in doubt. I think that nearly every surgeon has had this experience and desires that the tangle be unravelled and that, if possible, the matter be made simple and clear. There is much in breast pathology that is not clearly understood, but I believe that this can be done. We may not be able to follow the pathologist in every detail, but our main conceptions may be correct and at the same time simple. Incidentally it will be invaluable in the matter of management. This is

best attained, in my opinion, by going back to the original histology of the breast in its various phases of sex life. Before puberty the male and female breast is very similar. It consist merely of a few ducts without acini. In the male this rudimentary condition ordinarily persists through life. In the female, however, because of the function which the breast must serve, the histological

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changes are very great. At puberty the ducts extend and ramify and acini or buds of epithelium are formed in the various lobules which together represent the whole mammary gland. These acini contain no lumen and are functionally inert. At each menstrual period there are more or less marked histological changes attended often by congestion and tenderness. There is a rapid formation of acini and new lobules derived from the epithelium of the small ducts. When impregnation does not occur these new lobules disappear. In other words, they undergo involution. A woman menstruates 300 or 400 times or more during her life, so that this influence becomes a very important one. At the menopause, when ovulation no longer continues, the breast passes permanently into a condition of involution. The most marked change of all occurs when pregnancy takes place. The gland becomes the seat of an extreme epithelial hyperplasia and a lumen is formed in the acini. According to Boyd, the acini are enlarged, large numbers of new acini are formed, the epithelium changes from the cuboidal to the tall columnar form, and the lumen of the acini may be crowded with firm like epithelial projections very much like that of thyroid hyperplasia. It is a picture of unbounded epithelial activity, differing from that of carcinoma in that the activities are restrained and orderly. These changes are still more marked immediately after labor, when the gland is called upon to produce milk. After lactation ceases marked involution takes place. An involuting breast varies greatly in appearance at different points. Evolution or involution appear to affect the organ in no uniform fashion. The picture is a mixture of hyperplasia and involution. Speaking generally, there is an atrophy of the parenchyma with an increase in the fibrous tissue. Other changes in the structure of the breast, of which there are many, are secondary to this simple process.

All of these changes are due to the influence of the ovary in its various functional and histological cycles, and perhaps some of the other ductless glands in combination with the ovary, and apparently to other influences not understood. I am passing by those changes due to infection which come mainly under the observation of the obstetrician. If the changes in the breast went on in a perfectly orderly way they would

be of academic interest only, but such, of course, is not the case. The involution which takes place after ovulation, pregnancy or lactation may not be regular, and in consequence we have a whole array of pathological changes which may be grouped under the title "chronic mastitis." Among these we find round cell infiltration, which has led to the idea that we are dealing with a primary inflammatory condition or infection. The truth is that the whole picture means merely an abnormal hyperplasia-involution process. Because of tradition, the term "chronic mastitis" will probably remain and I am retaining it here.

"Chronic mastitis" in milder form undoubtedly exists in many breasts, but it is not clinically easily made out, especially if there is plenty of adipose tissue. In more outspoken form and in thin breasts it is more easily detected—there is thickening and slight nodulation. More particularly in its manifest forms such breasts may give rise to pain. Certainly the so-called "chronic mastitis" which is so common is not to be regarded particularly as a precursor of carcinoma, in the sense that its removal for preventive purposes is advisable. Probably most women, if their breasts were to be intimately examined, would present pictures that would correspond to the condition known as "chronic mastitis." In manifest forms we may not particularly prognosticate the later development of carcinoma. In fact, women who do develop carcinoma, judging by experience, give but little antecedent history of any trouble with the breasts. If such breasts are ever removed it should be done only because of exceptional pain and discomfort.

With a knowledge of the histology of the breast and its normal manifestations during various phases of sex life, and with a knowledge of the processes of abnormal hyperplasia-involution processes, we are ready to discuss the neoplasms of the breast. The tumors of the breast, including carcinoma, are untoward effects of this process of evolution and involution. Just why a woman develops a particular neoplasm is, of course unknown to us. We must content ourselves at present with knowing that each is simply a part of a general process. There is a long list of such neoplasms, but most of these tumors occur infrequently, and the tumors which we see from day to day come under

a few general headings. First, those tumors which occur directly as the result of an abnormal hyperplasia-involution process. The cysts of the breast are its best example. The cysts do not occur as a blocking of the ducts, but to a natural increase in the size when the acinus was enlarging during hyperplasia and which, for some reason we do not understand, failed to return to its normal size; the hyperplastic epithelium disappears, more fluid collects, and we have a cyst. Cyst formation, therefore, may be looked upon as a direct evidence of abnormal involution.

The intimate reasons for the development of the adenofibromas are not understood, and we must be satisfied at present with knowing that they are a part of a localized abnormal hyperplasia-involution process. They may be single or multiple, and inclined to recur in the same or the other breast. They may be readily divided into three groups. A peri-canalicular fibroadenoma, a hard growth, well encapsulated, a very movable tumor giving very definite microscopical findings of fibrous and adenomatous tissue. The intracanalicular fibroadenoma is a second variety. It is similar to the pericanalicular form but has much more of the fibrous element. It is also an encapsulated tumor and on the cut surface may resemble somewhat a carcinoma, but both of these tumors are encapsulated and not diffuse as with carcinoma. There is remarkable proliferation of connective tissue which projects into the ducts in the form of polypoid masses producing great elongation and distortion of the ducts, which are usually much dilated. From this growth arise many varieties and therefore a multiplication of terms in naming them. Neither becomes carcinomatous. A third form of benign growth which interests us more and more because of the possibility of its developing into carcinoma are the duct-papillomata. The two previous varieties do not develop into carcinoma; the latter may. An occasional sarcoma apparently develops from the simple adeno-fibromas, but this is very rare. The papillomatous form is that in which we see a little bloody discharge from the nipple, and finding this we may suspect one or two things—either the woman has a carcinoma actually developed, or that she has a simple papilloma. The bloody discharge is due to the fact that the blood vessels are large and thin walled, which gives

rise to a little bleeding. In this benign growth the epithelial element is the most in evidence and of greatest importance, whereas with adeno-fibromas in general, fibrous tissue plays the larger part.

The intimate cause of carcinoma of the breast is, of course, unknown here as elsewhere. It is again associated in a general way with the hyperplasia-involution process that I have mentioned. Thus one may trace the connection between ovulation and carcinoma of the breast.

It is well to remember that by the time cancer of the breast is clinically manifest the disease has already made some little progress. The diagnosis is practically certain when there are definite signs of contraction or of invasion. If such were always present we would be relieved of much responsibility and might manage differently with the benign neoplasms. But such, of course, is not the case. Cancer very frequently masquerades under the cloak of a simple or benign process. We may make a shrewd guess as to the nature of a particular tumor that we see, but we cannot be sure, as experience shows, and it is, therefore, necessary to explore all neoplasms to determine their nature.

The so-called duct carcinoma is the most frequent form met with—the acinar form is less frequent. Those arising from previous papillomata are common enough and here is where we must frequently have our pathologists in doubt.

There is one form of carcinoma of the breast which merits special consideration, although its incidence is not nearly as frequent as are other forms—namely, Paget's disease of the nipple. Any protracted inflammation of the nipple and areola should give rise to the thought that we may be dealing with a Paget's disease of the nipple and that, therefore, the process is malignant. The disease begins below the nipple, oftentimes in the ducts, and in its beginning does not manifest itself by a palpable tumor. The lymphatics to the skin become blocked and a dermatitis, or something that resembles it, is the result. The epidermis becomes hypertrophied, Paget's cells, which are merely edematous cells, may be found and there is epidermal round cell infiltration. When we see such a case clinically an exploration of the breast is necessary. Such problems are oftentimes real problems, a diagnosis being

easy neither for the clinician nor the pathologist. If the disease is established within reasonable certainty radical amputation should be done.

Consider now the array of pathological conditions of the breast as they commonly present themselves to the clinician. Does a tumor exist, or not? Are we dealing with a chronic mastitis, so-called, or one of the neoplasms which are associated with it? Is the neoplasm benign or malignant? Careful palpation of the breast, more particularly with the hand flat against the breast, will demonstrate the presence of a neoplasm in the vast majority of cases. Breasts that are subject merely to chronic mastitis flatten out under palpation—a neoplasm does not. It is an old method of examination, but a fairly reliable one. If doubt exists the breast should be explored. If a neoplasm exists the first and all-important thing to determine is what is its nature. I reiterate for

the sake of emphasis. One should suspect carcinoma, however simple the case, until the contrary has been proved. To be sure we sometimes make a shrewd guess, but that is not sufficient and no one, however expert, can be too sure. I believe we should be prone to conservatism and remove a benign tumor itself and no more whenever feasible. They may recur and one may again operate conservatively. Occasionally such a breast is best amputated. Carcinoma of the breast on the other hand, if operable, demands a radical operation. Most of the mistakes are made by putting off this procedure. For the sake of treatment one may divide all tumors of the breast into two groups—first, carcinoma that is so manifest that one may be unqualifiedly sure of the diagnosis, and secondly, all other tumors considered doubtful and demanding an investigation.

SOME CRITICAL REMARKS ON THE RECENT LITERATURE ON SPINAL ANESTHESIA

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DETROIT

With the very great increase in the literature on spinal anesthesia, it seems regrettable that many articles appearing in the current literature are written either by *proponents or opponents* of the method and their analysis of the subject is reflected by opinions already formed as to its value or lack of value. This unfortunate condition serves to confuse rather than to clarify the problem.

I shall quote a few recent authors to illustrate: Ferguson and North in a very excellent experimental article say: "A favorable early reception of a new clinical method may in itself prove a handicap." "The very enthusiasm with which they (the methods) are received may be their undoing."

When a doctor comes into the operating room and sees the great relaxation and increased room in the abdomen provided by spinal anesthesia and the very apparent advantage obtained, he very often immediately decides to use the method, and forthwith starts its use without any possible training nor any idea about its *indications* or *contra-*

indications and with no idea what to do to prevent untoward symptoms nor what methods to use to combat them if they arise. He soon meets some obstacle with which he is unable to cope and blames his troubles to the method rather than to his own lack of experience or training in handling it.

I have absolutely no quarrel with anyone who desires to use spinal anesthesia nor with any one who does not wish to use it but I feel that articles written on the subject should throw as much light on the method and give as much scientific information as possible without being subject to possible criticism or bias.

A few examples with accompanying comment will serve to explain.* One article†

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stated: "Untoward symptoms occurred in 90 per cent of the cases."

I submit that this statement is an exaggeration or else is greatly in need of explanation. In the "untoward symptoms" referred to, nausea and vomiting were leading reactions. I am sure that any one with any experience with spinal anesthesia will say that nausea and vomiting are certainly less than with inhalation anesthesia.

The same article suggests that "spinal anesthesia should not be used in operations on the heart, lungs, neck, head, and throat."

Now it is a generally accepted fact by most surgeons using spinal anesthesia that it is not to be used in operations above the diaphragm.

Another article on spinal anesthesia² states that pulmonary complications are 4.29 times more frequent than with inhalation anesthesia.

In the same article, the statement is made that "operations lasted one-half longer under spinal anesthesia than under inhalation anesthesia."

We are unable to review the statistics quoted on the pulmonary complications but because of the fact that the statements about time consumed in operation are so completely at variance with the usual observations together with the fact that these statistics (regarding pulmonary complications) are at great variance with the usual findings of other observers we cannot help entertaining some skepticism upon the whole report.

Everyone with whom I have discussed the article is at a loss to explain this statement (regarding duration of operation) as the experience of all with whom I have discussed it is that the time of operation is reduced by 25 per cent to 35 per cent because of the greater relaxation and retraction of the viscera.

Falkner Hill of Manchester, England, a very careful observer and excellent authority on anesthesia, says:³ "In spinal anesthesia muscular relaxation is so complete as to facilitate and therefore shorten every abdominal section."

Kreig,⁴ in a careful review of 222 cases of spinal anesthesia, writes: "We have found in this series that spinal anesthesia was generally superior to other anesthetics of equal magnitude. We believe that it should be given wider consideration in emergency surgery below the diaphragm because shock,

trauma and time were naturally lessened and the immediate postoperative progress was more rapid."

Koster and Weintrob, after a comprehensive search of European and American journals for data on the complications of spinal anesthesia, write: "Pulmonary complications were found to be certainly less frequent than after inhalation narcosis."

Weinstein and McHugh⁵ are of the opinion that "trauma is minimized and operation time almost halved." "The incidence of postoperative pulmonary complications is much reduced."

Lindemulder⁶ refers to deaths following spinal anesthesia in prostatic cases. "First patient died twenty days after operation. His only complaints up to two days before his death were weakness and pains in the extremities. He suddenly went into coma, at which time his blood pressure was 138 systolic and 72 diastolic. The nonprotein nitrogen was 55.6 mg. The heart showed mild decompensation. The neurologic examination was negative except for diminished tendon reflexes. An autopsy was performed five hours after death. The pathologic diagnosis by Dr. C. V. Weller was as follows: "Section of the spinal cord and meninges showed congestion and numerous small psammoma bodies in the meninges. The brain demonstrated congestion and edema in the meninges and brain substance. Throughout the lower portion of the pons and upper medulla there were numerous small false psammoma bodies of the myelin droplet type. There was advanced chronic bilateral ascending purulent pyelitis and pyelonephritis, hyperplasia of the prostate with urinary obstruction, urinary extravasation through area of necrosis in the bulba urethrae, subacute purulent cystitis and prostatitis with fibrinopurulent exacerbation in the operative field, hypertrophy of the bladder musculature, generalized arteriosclerosis (most marked in the aorta and coronaries), calcifying endocardial sclerosis, myocardial fibrosis, nutmeg liver, and chronic adhesive pleuritis."

The second patient, who died twelve days following operation and who had been treated previously for syphilis, showed no evidence of organic disease of the central nervous system at the first examination. Following operation, he complained of pains in his arms and shoulders. The Kahn reac-

tion, as well as other spinal fluid examination, was negative. He had good anesthesia during the operation, but immediately following it he was confused and coöperated poorly. Apparently he was able to feel pain and the tendon reflexes were hyperactive. The pathological findings made by Dr. C. V. Weller were as follows: "There was edema of the meninges and spinal cord. No myelinosis was present in the upper cervical cord and in the medulla, but in the lower cord there was a marked myelinosis, especially near the meninges. Some small nerve roots showed an extensive degeneration of the fibers with a loss of myelin sheaths. There was advanced adenocarcinoma of the prostate, metastasis in regional and bronchial lymph nodes and vertebrae, partial transurethral recession of the prostate, chronic purulent cystitis, right ureteritis, pyelitis and pyelonephritis, pyemic pneumonia, old syphilis (myocarditis, aortitis, hepatitis, supranalitis, orchitis), coronary and aortic arteriosclerosis, and endocardial sclerosis, with calcification."

The age of neither patient is mentioned but the article states that all cases were between fifty and seventy. It seems pertinent to mention here Deaver's statement that "mortality is bound to be high in surgery on the dying."

The title of Lindemulder's paper, "Spinal Anesthesia—Its Effects on the Central Nervous System," would lead one to think that the author attributed these deaths and particularly the postmortem findings in the central nervous system to the spinal anesthesia. The findings in these cases discussed by Lindemulder which he implies is the result of spinal anesthetic can be discounted. In the first case, the small calcified deposits described (psammoma bodies and false psammoma bodies of the myelin droplet type) are very often seen in old age and long standing degeneration of the spinal cord. It seems quite unlikely that such extensive changes could be brought about in such a short time. It is more plausible to assume that they existed before the spinal anesthesia. In the second patient, the autopsy findings are not conclusively attributable to recent damage of the spinal cord. Staining for spirochetes in the lower section of the cord especially in view of the old syphilis might have revealed unsuspected findings. Furthermore, the time between

death and autopsy is not stated in this case and it is well known that central nervous system tissue degenerates *rapidly* and *not equally* after death.

Another author⁷ produces what he terms a "yardstick" for anesthesia. This "yardstick" immediately precludes the possibility⁵ of using *any* form of *spinal* or *local* anesthetic of *any* nature.

I doubt seriously if many present day surgeons would be willing to completely abandon all forms of local anesthesia for the sake of the "yardstick" quoted. But after relegating all forms of local anesthesia to the "limbo" by the "yardstick," the author goes on to state that spinal anesthesia is very dangerous, more so than chloroform. He then quotes from Dr. L. F. Sise of the Lahey Clinic in Boston "that there were fourteen deaths in Greater Boston in 1928 in 1,900 cases." He failed to state, however, that the article in question further stated that in the clinic reporting there was only one death and the cases in which it was used outnumbered by more than two to one all other cases reported in Boston. This article was essentially an appeal for more knowledge and better technic in the use of spinal anesthesia and showed that while the death rate was near 1 in 50 in Greater Boston in general during that period still there was only one death in about 1,200 cases in their own clinic.

I have not the article in question before me but I have stated the essential facts.

Bevan's article further states: "Spinal anesthesia is not a comfortable method, especially to an intelligent man who realizes what is being done. Few medical men with knowledge of anatomy and anesthesia would choose spinal anesthesia in their own case."

I am quite sure that some of the "intelligent" people I have operated upon under spinal anesthesia would take exceptions to this statement as in *every* case they have been greatly pleased with the method and insist they would never be operated upon by any other method. In regard to the latter part of the quotation, I shall be glad to refer to the Chief Resident Surgeon, the Chief Resident Physician, other internes in our hospital, the Chief Surgeon of another large hospital in this City, the Chief of a Research Department in a manufacturing drug house as well as several other medical men who have been operated by me in the last year

under spinal anesthesia by their own request. The author refers to "especially persistent and severe headaches lasting for days and weeks." In our series of over 1,900 cases, we have had four headaches, two quite severe, one lasting two or three days and one lasting five days. Of course, those employing spinal anesthesia regularly are not finding any difficulty in eliminating these headaches and controlling them if they should occur.

Another writer⁸ states: "Tiltometer recommended by Pitkin which gives the exact angle at which the table should be set is helpful but does not always insure success." In this connection it should be remembered that we are administering this anesthetic to the *patient* and not to the *table* and while the tiltometer gives the level of the table the patient with broad hips and narrow shoulders would have a spinal canal distinctly in the Trendelenburg position though the table was absolutely level. The reverse, of course, would be true with a patient with very broad shoulders and narrow hips. The greatest variation, however, is found in those with a lateral curvature of the spine in the lumbar region. I know of no other way of insuring the absolute level of these spines except by the use of a small device of the nature of a spirit level with an air bubble. This device was first brought out by Dr. T. G. Yeomans of St. Joseph, Michigan, and has been used by myself in over one thousand consecutive cases with uniformly good results. This author further states: "The weight of the patient should also have some bearing upon the dose to be used, somewhat larger doses being indicated in heavy cases." The size of the patient's bony structure has a definite bearing on the amount of anesthesia required. The weight of the patient, however, has no bearing whatever, that is to say, a patient of small bones and a stature of five feet would not require any more spinal anesthesia if he weighed 200 pounds than he would require if he weighed only half that amount.

This writer further maintains that: "The last two drugs (ephedrine and adrenalin) are supposed to act upon the vaso-constrictors which are contained in the anterior or motor roots. The latter being paralyzed, no amount of stimulation would produce any effect."

The above statement has been made by

many writers on this subject and we are surprised that writers still take the same position. The fact remains that effect is produced, theory to the contrary notwithstanding. This effect of raising the blood pressure with ephedrine after anesthesia is complete can be demonstrated on any case at any time during the operation. This we have proven repeatedly in the same case and in many different cases. This author further declares, "Regarding cardiac and respiratory complications that are so many other contributory factors besides the anesthesia that nothing definite can be gained by simply quoting statistics. Such complications as post-operative coronary thrombosis, pulmonary embolism, pulmonary atelectasis may occur under any type of anesthesia, general, local or spinal. On the other hand, the complications due to irritation of the respiratory tract or to inhalation of foreign substance will be practically nil. In cases of intestinal obstruction where, under general anesthesia, patients often die from drowning in their own vomitus, spinal anesthesia is certainly a life saving method." With this statement, we absolutely agree.

Crile, in his experiments on shock from anesthetics, tells us that in normal men inhalation anesthesia (chloroform and ether) more markedly than nitrous oxide or ethylen and oxygen anesthetic caused increased hydrogen-ion concentration of the blood, forming an acute blood acidosis during and about an hour after anesthesia. Protracted ether or chloroform anesthesia causes cytologic changes in the cells of the brain, the liver, and the adrenals identical with those resulting from other causes of exhaustion. After four to six hours of continuous ether anesthesia, many animals die at once. He finds that ether and chloroform actively contribute to shock. The ill effects are due to a chemical effect of the anesthetic on the brain cells.

The following is a quotation from Weinstein and McHugh:⁹ "If spinal anesthesia is dangerous, it is because it is used carelessly. If there is infection, it is because the technic has not been perfected."

Sullivan¹⁰ reports a case of a man who had nine spinal anesthetics in less than two years, five of these spinal anesthetics were given in thirty-eight hours, following which a complete neurological examination showed no reflex sensory or other changes.

I feel that the foregoing quotations together with our comments on them will serve to emphasize the importance of very careful thought and analysis before positive and dogmatic statements are made, particularly in the medical literature which is read so generally by many men who are not in position to evaluate some of the statements for themselves.

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THE TREATMENT OF TRICHOMONAS VAGINALIS VAGINITIS*

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Nearly one hundred years have passed since Donné, in 1837, described the protozoa *trichomonas vaginalis*. Contemporary writers considered these flagellates as harmless parasites, and of no clinical importance. In 1896 George Dock¹ reported the finding of *trichomonas vaginalis* in a vaginal discharge, and N. S. Davis² reported a similar case. DeLee³ in 1920 gave a good clinical picture of this type of vaginitis. However, no general interest in this subject was manifest until 1928 and 1929 when Greenhill⁴ and C. H. Davis⁵ presented papers, describing a distinct clinical picture of a vaginitis caused by *trichomonas vaginalis*. In the past two years numerous authors have published articles dealing with this subject.

Inasmuch as the object of this paper is to bring to the attention of the profession a new method of treating vaginitis produced by the *trichomonas vaginalis*, only a brief clinical description will be given.

The majority of patients suffering from this protozoan infection consult the physician because of an irritating vaginal discharge. Usually they have had considerable local treatment, with a temporary improvement, but after a time the infection has returned. Many have had operative procedures without any improvement. Frequently these patients are told that they are suffering from a gonorrheal infection in a chronic state. Kamperman⁶ calls attention to the number of married women, who have dysperunia from a *trichomonas* infection.

The local examination reveals an irritated, reddened vulva and introitus. In the severe cases a dermatitis or intertrigo is seen about the vulva and on the thighs. The vagina is diffusely red or shows irregular areas of redness. The vagina is extremely sensitive, and bleeding occurs upon digital

or speculum examinations. The cervix may be uniformly inflamed or show a mottled appearance; however, the cervical canal seems to resist this infection.

The leukorrheal discharge is fairly characteristic. It is a thin, greenish yellow discharge; at times it is foamy in appearance, and has an acrid, disagreeable odor.

The diagnosis is easily made by mixing a loopful of discharge with a few drops of physiological salt solution, and examining with a high power objective. The protozoa are easily seen when the light is cut down. If the patient has taken a douche within forty-eight hours preceding the examination, it is almost impossible to find the causative agent. At the end of menstruation the organisms are most numerous, as they seem to thrive best in a blood-containing medium.

All of the clinicians who have treated many cases of *trichomonas vaginalis* vaginitis are agreed that many chemical agents will cause the protozoa to disappear, but the tendency toward recurrence is very marked. This is especially true in women before the menopause.

C. H. Davis⁷ studied the effect of various germicides on *trichomonas vaginalis*. The

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agent used were: gentian violet, mercurochrome, glycerine, methylene blue, alcohol, copper sulphate, lactic acid, Lugol's solution, bichloride of mercury, lysol, potassium permanganate, metaphen, green soap, sodium hydroxide, silver nitrate, alum, and zinc sulphate. Of these agents the most effective were: alcohol, green soap, Lugol's solution, bichloride of mercury, lysol, silver nitrate and mercurochrome.

No specific treatment has been advanced for trichomonas vaginalis vaginitis. Each worker has favored a certain chemical agent found in the group before mentioned. A somewhat general routine has been followed by all. On the supposition that the infecting agent comes from the intestinal tract, the external genitals and anal region are scrubbed with tincture of green soap; the vaginal and cervix are scrubbed with cotton pledgets soaked with green soap; the vagina is irrigated and dried; some germicidal agent is applied to the vaginal walls and the cervix, as well as the external membranes; or tampons containing the chemical agents are inserted and left in over night. Germicidal douches are used by the patient between office treatments.

To illustrate the various agents used in the treatment of this disease I quote a paragraph from J. P. Greenhill's⁴ recent article.

"While this type of vaginitis can readily be relieved by local treatment, it is frequently difficult to cure it. A large proportion of women have recurrences either early or late, and because of this, many recommendations have recently been made concerning the treatment. Davis⁷ suggests the use of compound solution of cresol or green soap, followed by antiseptic powders for some cases, and mercurochrome-220 soluble and glycerin for others; Furniss⁸ praises a 1:4000 solution of mercuric chloride used as a douche; Cary favors 2 per cent silver nitrate; Kleegman and Holden apply mercurochrome and Lassar's paste; Gustafson⁹ uses sodium bicarbonate douches and glycerine-soda tampons, and Mathieu¹⁰ obtained good results with a treatment I outlined in my previous paper, except that he substituted hexylresorcinol for the methylene blue."

Greenhill¹¹ is now using hexylresorcinol in place of methylene blue.

These references show the treatments be-

ing used at present, and emphasize the lack of a specific treatment for this disease.

About one year ago, at a hospital staff meeting, I gave an informal talk on trichomonas vaginalis vaginitis. Dr. Mark Marshall, in discussing the subject, said that several cases of trichomonas intestinalis had been treated by intravenous neo-salvarsan, and apparently cured.

Immediately I tried this drug in very dilute solutions, using the living active protozoa in a drop on the glass slide. In very dilute solution, the protozoa immediately became non-motile and apparently were killed.

At this same time, I had twelve patients under treatment for vaginitis caused by this organism. Using 0.3 of a gram of neo-salvarsan, dissolved in 10 c.c. of distilled water, tampons saturated with this solution were inserted into the vagina after scrubbing with green soap. These treatments were given twice each week for four treatments, and the results were good, although two patients in this group were irritated by the solution coming in contact with the excoriated external genitals. Later a thin ointment was prepared from:

Neosalvarsan .....	.3 gram
Glycerin	2 drams
Muscio. tragacanth. q. s. ad.....	2 ounces

This was put up in a collapsible tube, to which a small glass douche point could be attached. This preparation when injected into the vagina, caused no irritation and produced the disappearance of the trichomonas.

Using the following routine, I have treated thirty-two patients during the past year. Having confirmed the diagnosis by the microscope, the external genitals and anal regions are cleansed with a tincture of green soap. A vaginal speculum is inserted and the discharges carefully wiped out with cotton pledgets. No attempt is made to scrub the vagina nor to produce bleeding from the reddened areas. The vagina is filled with the neo-salvarsan ointment and a small tampon is inserted to keep it in. This medicine is left in until the following morning, when the tampon is withdrawn and 0.5 per cent lactic acid douche is taken by the patient. Each night, except when the tampon is in, the patient injects an ounce or two of a 1-2000 neo-salvarsan solution into the vagina, using a small ear and ulcer syringe. Each morning, the patient takes a

lactic acid douche. The office treatments are given twice each week for one month, and the 1-2000 neosalvarsan solution is used for one month after office treatments have stopped. The treatment is discontinued after two months, and from time to time any discharge found is examined for protozoa. The patients are requested to come to the office just after menstruation is over.

With the exception of two cases, all of the patients receiving this treatment have apparently been cured. The two exceptions have been irregular in their treatments due to traveling and other interruptions.

The advantages of this method of treatment, over the others recommended, are several. Most patients object to the scrubbing of the vagina with green soap, because it increases the irritation and produces soreness, especially in the acute stages. (Several patients discontinued the treatment because of the discomfort produced by this treatment.) Nulliparous patients and virgins can be treated by this method, without any undue irritation. The drug seems to be specific for the trichomonas vaginalis.

I have had no experience with the intravenous method of giving neo-salvarsan

for this infection, but if a patient could not be kept under observation and treatment, or she proved refractory to other methods I would certainly use the intravenous method.

Trichomonas vaginalis vaginitis is a common infection as shown by the numerous recent reports. The clinical picture is clear and easy to recognize. The diagnosis is easily made by the hanging drop method or by the glass slide. Recurrences after treatment are numerous and call for persistence in the treatment. Neo-salvarsan used locally in solutions or in ointments promises prompt relief. Intravenous neo-salvarsan may be specific for trichomonas vaginalis infections, but as yet no reports have been made.

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THE PHYSICAL THERAPY OF THE COMMONER SKIN DISEASES*

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The chief physical agents employed in the treatment of skin diseases are the roentgen rays, ultraviolet rays, electrodesiccation and electrolysis, and this brief paper shall be limited to a consideration of only these four agents. The roentgen rays are, of course, the most useful of all, but extreme care must be exercised regarding accuracy of dosage, and the total dose administered over a given area must not exceed 4 skin units (4 minimum erythema doses), even over a long period of time, if ultimate atrophy, telangiectases and other undesirable sequelæ are to be avoided. MacKee has carefully worked out and tested a simple system of dosage measurement which has proved universally satisfactory in over thirteen years of use by

leading dermatologists. This system is well described in MacKee's book,¹ and that volume, as well as Hazen's recent publication,² are recommended as necessities to all who would treat skin diseases with roentgen rays. In this paper the term "skin unit" refers to the minimum erythema dose as measured by MacKee. With a 6-inch spark gap and a current strength of 3 milli-

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amperes, at a distance of 8 inches from the target to the skin, no filter being used, exactly 2 minutes would be required for the administration of a 1 unit dose, 1 minute for $\frac{1}{2}$ unit, 30 seconds for $\frac{1}{4}$ unit and 15 seconds for $\frac{1}{8}$ unit. A quarter-unit dose is usually employed, and for the scalp $\frac{1}{8}$ unit, at intervals of 7 days, and this is called fractional treatment.

Ultraviolet is of some importance as an agent in cutaneous therapy, but unfortunately its value in the treatment of many conditions seems to have been sadly overrated. So far as we know at present, it does no permanent damage to the skin. But these views may have to be revised in the case of its protracted use, over a period of years, for it is entirely possible that potentially premalignant keratoses may ultimately develop, as in so-called "sailor's skin." However, in dermatology such prolonged exposure is rarely needed.

Electrodesiccation, in which the monopolar high frequency current is employed with an ordinary small sewing needle as the electrode, is very useful for the removal of small growths, if properly handled. In my hands it has almost entirely replaced solid carbon dioxid and trichloroacetic acid. Those who would use it are referred to Wyeth's book on the subject.³ Its chief dangers lie in the employment of too strong a current or going in too deeply. A small needle is usually the best electrode for cutaneous work, and in the removal of warts and moles it is necessary to remember that the needle point should not penetrate deeper than the level of the surrounding skin surface. A spark of $\frac{1}{32}$ of an inch or less should be used, as a rule. In this way the growth may be removed at one sitting, and ultimate scarring may be minimized. In my experience with this method of treatment⁴ in 812 cases, keloid developed in only 2, and was then readily controlled by roentgen rays. But it would not seem advisable to employ electrodesiccation in patients with a tendency to keloid formation.

Electrolysis is a simple, comparatively harmless procedure, more tedious and often less thorough than electrodesiccation. A very fine needle, such as the English jeweler's broach, is used, together with a suitable milliammeter which is easily read and a current maintained at exactly 1 milliampere. Accurate time measurement is also essential.

THERAPEUTIC APPLICATIONS

Acne vulgaris is a disfiguring disease, often leaving permanent scars and frequently acting as a serious handicap in the patient's contacts with his fellows. Therefore all cases of acne should be properly treated, and none should be dismissed lightly with the statement that the condition will run its course and disappear sooner or later. Vaccines, which have enjoyed considerable popularity in the treatment of acne in general practice, have generally been proven practically worthless in the hands of dermatologists. In many of the milder cases attention to the general health and hygiene, together with constant strict avoidance of sweets and fats in the diet and treatment of the ever present seborrhea of the scalp, will effect a cure. When these measures fail, and in the more severe cases, we must depend upon irradiation with roentgen rays or ultraviolet, and the former is by far the more effective of the two, so far as permanent results are concerned. Quarter-unit doses of roentgen rays are given weekly, every fifth or sixth week being skipped, and a total of 12 such treatments is usually needed to complete the cure. No improvement is apparent, as a rule, until the course is half completed. The forehead and each cheek are treated separately, and the eyes, eyebrows and front of the neck must be carefully screened with lead foil.

Some authorities have advised the combined use of roentgen rays and ultraviolet, but MacKee and Andrews have shown that this is dangerous, for any irritant may enhance the roentgen ray effect and produce an undesirable erythema, possibly followed by atrophy. For the same reason, irritating lotions must be avoided. Used alone, ultraviolet often produces some improvement, which is only temporary as a rule.

In my series of 399 patients completing a course of treatment with roentgen rays, 335, or 84 per cent, were cured in one course, averaging 12 treatments.

No form of treatment is likely to succeed unless the general health, hygiene, diet and scalp receive strict attention, as noted above, and the factor of constipation must never be overlooked. Continued attention to the scalp, diet and hygiene will usually suffice to prevent a recurrence, but in certain cases the eruption may reappear in spite of these precautions, and then irradiation must be

used sparingly, so that the total dose administered, including the first course, does not exceed 4 units. An occasional failure must be admitted.

Rosacea is hard to cure, and it cannot be treated successfully unless the patient's general health is thoroughly investigated and corrected. I have seen cases that resisted all treatment until an infected gall bladder was drained, and others which improved after sinus infection had been attended to. The diet must be observed as strictly as in acne vulgaris, sugars, fats, and also very hot, irritant and spicy foods and drinks being avoided constantly. Roentgen therapy, in fractional doses, often seems to cause a discouraging temporary exacerbation of the rosacea, which subsides toward the end of the course. Of 83 patients finishing a course of treatment, 71, or 85.5 per cent, were cured, an average of 13 quarter-unit exposures being required. Continued care is required to prevent a recurrence.

Epilation by means of roentgen rays has been widely recommended for use in cases of sycosis vulgaris, but I have not used it for this purpose during the past 10 years. Persistent local antiseptic medication has succeeded, and atrophy and telangiectasia have been avoided.

In the treatment of ringworm of the scalp, in this vicinity irradiation is not required. Complete cure can be effected by means of local medication, thoroughly applied. Penetrating applications containing iodine and thymol have sufficed. The same is true in cases of tinea cruris, but here the strength of the local medication must be reduced in order to avoid irritation.

Dermatophytosis, epidermophytosis or ringworm of the feet and hands, occurs in perhaps 50 per cent of the adult population, and as we all know it is very hard to cure. So far as I have observed, the use of ultraviolet is fruitless, and roentgen irradiation seems valuable only in clearing up the eczematoid manifestations. Such treatment does not seem to destroy the causative organism, and therefore it must be accompanied by the regular and frequent use of suitable mild parasitocides, such as potassium permanganate solution and preparations containing thymol and salicylic acid. If roentgen therapy is being used, irritating applications, such as Whitfield's ointment and its proprietary modifications, should be

avoided, and 2 per cent should be the maximum for active ingredients, excepting, of course, zinc oxid or boric acid. In my series of 513 patients receiving roentgen treatment, 71.9 per cent were cured or relieved with one course, averaging 8.4 treatments in quarter-unit dosage. After a cure has been effected, the continued daily use of a mild parasitocidal application is advisable, in order to prevent reinfection.

In treating the eczemas and the eczematoid eruptions, including many occupational dermatoses, eczematoid ringworm (mentioned above), seborrheic dermatitis, infectious eczematoid dermatitis and neurodermatitis (local and generalized), fractional roentgen irradiation is usually helpful. But in conditions which tend to recur it must be used sparingly, and as a procedure of last resort. And in order to secure the quickest benefit, suitable local medication of a mild type must be used simultaneously, and of course the cause must be removed if this is possible. Therefore it is not sufficient to diagnose the condition merely as eczema or an eczematoid eruption, but it must be accurately classified. A very important factor in successful treatment is the strict avoidance of scratching. The antipruritic effect of the roentgen rays is valuable but it develops slowly and must be supplemented by the frequent use of suitable local soothing applications.

In my series, 328 patients received roentgen therapy for seborrheic dermatitis, and 258, or 78.6 per cent, were cured in one course, averaging 5 quarter-unit doses. I treated 148 cases of pruritus with lichenification, and 124, or 83.7 per cent, were cured following an average course of 5.6 fractional treatments. In 71 cases of localized neurodermatitis, which were similarly treated, 56, or 78.8 per cent, were cured after one course, or an average of 6.5 exposures.

Psoriasis, recurring perennially as it usually does, may often tax the therapeutic versatility of the most ingenious. Fortunately, many cases respond well to treatment with direct sunlight, either natural or artificial, and such treatment may be repeated ad libitum with a fair degree of safety. Occasionally, however, an acute outbreak may be aggravated by ultraviolet exposure, and therefore it is advisable that the effect of this treatment be tried first over small

areas. Also of course there are some cases which absolutely fail to respond. Ointments, autogenous serum and other measures are often of value, and also arsenic, which, on account of its potential late dangers, should be withheld for cautious use as a last resort.

Roentgen rays, in quarter-unit doses weekly, constitute a clean and usually effective means of clearing up the eruption, but this very success may prove to be a danger, because the delighted patient is very likely to demand roentgen therapy for succeeding outbreaks. He may find a doctor who is willing to oblige, and if a total of more than 4 skin units is administered over a given area, even over a period of years, ultimate atrophy, telangiectasia and keratoses may result. I shall never forget one unfortunate middle aged man whom I saw in New York 12 years ago. He had widespread psoriasis, which had been recurring for years, and in addition there were many arsenical keratoses, and his hands and other parts showed extensive atrophy, telangiectasia, keratoses and epithelioma formation, the result of too much roentgen therapy. Therefore this form of treatment, while valuable, is to be used only occasionally and with caution. If the scalp is to be treated the weekly dose is usually $\frac{1}{8}$ unit, and the nails may receive a dose of $\frac{1}{2}$ unit every 2 weeks. Should the nail condition fail to respond readily, the treatment must be discontinued. I used roentgen therapy in 185 cases of psoriasis. The average number of treatments per course was 5.7, and 177, or 95.7 per cent, of the cases were temporarily cured. Eight, or 4.3 per cent, failed to improve.

In the treatment of pruritus ani, vulvæ or scrotalis, roentgen irradiation is very valuable, but it should always be used in conjunction with local mild antiseptic and antipruritic measures, including baths and proper ointments. Also the help of the proctologist or gynecologist may be required, and this had better be done first than last. Fractional unfiltered exposures are employed, $\frac{1}{2}$ unit being given the first week, $\frac{1}{3}$ the second, and $\frac{1}{4}$ each succeeding week, until one week after the itching has disappeared completely. Five or 6 such treatments are usually required to complete the cure, and in cases of pruritus scrotalis this amount of irradiation has been found to be safe. Of 104 cases which I treated, 85, or

81.7 per cent, were cured after one course. The others recurred later, but responded well to subsequent irradiation, and there were no failures recorded.

Keloids are removable only by roentgen rays or radium. In dealing with very thick keloids much time may be saved by excising the tumor and irradiating the scar.

Some cases of paronychia respond well to fractional ($\frac{1}{4}$ unit) or semi-intensive ($\frac{1}{2}$ unit) roentgen irradiation, the former being repeated weekly and the latter every 2 weeks, and it should be given a trial, but over-treatment is to be avoided.

Warts of all types may be removed by means of electrodesiccation, and if care is exercised the resulting scar should be negligible. A very fine needle should be used, and the tip of the needle should not penetrate deeper than the level of the surrounding skin surface. The rough warts that occur on the fingers and especially about the fingernails, and the warts appearing on men's chins and women's necks respond well to this treatment. Venereal warts also respond favorably. In dealing with plantar warts, however, it is often necessary to go in so deeply that the process of healing is protracted. Therefore, when confronted by a plantar wart, I usually pare it down as thin as possible with the curet, and administer $2\frac{1}{2}$ or 3 units of unfiltered roentgen rays, limited strictly to the wart itself. In my experience with plantar warts, 50 per cent have yielded to such treatment. If the wart does not disappear in 6 weeks, electrodesiccation may be used as a method of last resort.

Moles which are elevated above the skin surface may be removed by electrodesiccation. Those which are flat, like freckles, had better be left alone in order to avoid undesirable pitting. This method of treatment is rapid, usually removing the mole at one sitting, and the resultant scar is usually slight, if the technic is correct. The rough, warty moles may recur after electrodesiccation, and excision may be necessary. If the mole is hairy, any hairs which have not been removed permanently by electrodesiccation may be destroyed later by electrolysis. Capillary or spider nevi may be destroyed by electrodesiccation or electrolysis, and even cavernous angiomas may be desiccated effectively. The jet black or blue-back mole must be treated with respect, and had better

be excised very widely and deeply or let alone entirely. So-called senile angiomas, which are seen so commonly on the lips of elderly persons, can be destroyed readily by electrodesiccation. Xanthelasma, the small yellow tumors of the eyelids, may be removed quickly and completely by this means.

In cases of alopecia areata, even of long standing, the ultimate outcome is usually favorable, regardless of treatment. However, the regular use of massage and local irritants seems advisable, in order to stimulate the circulation about the hair roots on the chance of hastening regrowth of hair. In such cases, ultraviolet, in erythema doses, seems helpful, probably acting only as a local irritant.

Ultraviolet has enjoyed much popularity among the laity for treatment of premature and seborrheic alopecia, perhaps on the basis of the hope that the light might make the hair grow just as the beneficent sunlight helps the beanstalk to sprout. For 2 years I tried this form of treatment in these cases, but I have never had the good fortune to observe any regrowth of normal hair. Sometimes the growth of lanugo hair seemed to be stimulated, but it always remained lanugo hair.

Sluggish ulcers, especially those accompanying varicose veins, are often stimulated to heal by ultraviolet, which probably serves as a local irritant to increase the circulation. But other measures, such as elevation, must not be neglected if we would obtain good results.

The course of pityriasis rosea usually may be shortened a week or two by an erythema dose of ultraviolet, or by a small amount of fractional roentgen irradiation, and the latter is particularly helpful for the relief of itching.

Electrolysis remains the only safe method

for the permanent removal of superfluous hair. With careful technic, scarring will be slight or absent, and only about 10 per cent of the hairs will be likely to regrow. Such treatment requires much time and patience, and physicians have usually relegated it to the beauty parlors, but its correct performance is really one of the duties of the dermatologist. It may be done in his office by a trained assistant under his supervision. Under no condition should the roentgen rays be used for the removal of superfluous hair. Most dermatologists have seen women who have had hair removed in this manner and who have subsequently developed radiodermatitis, with all of its undesirable features.

In concluding, a few words of caution are needed. No case can be treated intelligently unless it has been correctly diagnosed and classified. And in the employment of physical therapy, as in other branches of medicine, good results are obtained only by those who have had the benefit of careful instruction and experience. Proper judgment is needed in handling each individual case, and one must know what form of treatment to use, how and when to use it, and when to stop. The dangers and limitations of physical therapy must be recognized. It must often be supplemented by other forms of treatment when these are available, in order to secure the best results.

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- (Also see MacKee's articles (Council of Physical Therapy): The treatment of skin diseases by physical therapeutic methods. *J. A. M. A.*, 98:1646 (May 7), 1932. Ultraviolet therapy in dermatology. *J. A. M. A.*, 98:1553 (April 30), 1932.)
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ELLIPTIC HUMAN ERYTHROCYTES

GARNETT CHENEY, San Francisco, calls attention to the fact that up to the present time, cases presenting human elliptic erythrocytes have been very rarely reported. It seems probable that they are more common than the meager literature indicates. The hereditary transmission of such unusual red cell forms is emphasized by a report of a family including forty-one members in three generations, fourteen of whom show this bizarre structure in the

blood. The transmission is probably by a simple mendelian dominant. Although this condition has been associated with secondary anemia and with sickle-cell anemia, there is insufficient evidence to justify any such relationship. Aside from the unusual erythrocyte forms, there is nothing else remarkable in studies of the blood or of the bone marrow. Elliptic human erythrocytes represent a departure from the round forms usually found and are not in themselves indicative of any disease, but are an inherited characteristic.—*Journal A. M. A.*

PERCUTANEOUS METHOD OF IMMUNIZATION
AGAINST DIPHTHERIA*EDGAR E. MARTMER, M.D.†
DETROIT, MICHIGAN

Since the introduction of toxin-antitoxin by von Behring in 1913, numerous modifications of the original preparation as well as methods of detoxifying diphtheria toxin to render it less harmful have been advocated.

The original von Behring toxin-antitoxin was based on the hypothesis that a slight excess of free toxin was necessary to produce immunity. Park, using fully neutralized mixtures of toxin-antitoxin, and Lowenstein and Bousson, using over-neutralized mixtures, were able to produce immunity and disprove von Behring's theory. They further showed that the immunity produced by toxin-antitoxin mixtures develops slower than the immunity resulting from the use of unneutralized toxin.

The original von Behring toxin-antitoxin frequently produced local and general reactions, especially in older children. To overcome these reactions fully neutralized and over-neutralized mixtures of toxin-antitoxin were advocated and used.

After several years the dangers of sensitization to horse serum following the administration of toxin-antitoxin became evident and goat or sheep serum toxin-antitoxin preparations were substituted for horse serum toxin-antitoxin. These products have been widely used, particularly in the United States, but have not proved entirely satisfactory due to the frequent serum reactions resulting from the injection of these preparations.

Because of the unsatisfactory results with toxin-antitoxin many investigators have attempted to develop a more efficient product.

Ramon suggested and Schmidt used the earliest modification known as toxin-antitoxin flocculent ("T. A. F."): Lowenstein recommended and Ramon perfected diphtheria toxoid (anatoxin). This preparation is made by the addition of formaldehyde to toxin with the application of heat. Formaldehyde under these conditions tends to render the diphtheria toxin innocuous. This material contains no animal serum or free toxin and its use is advantageous since immunity may be produced without developing sensitization to animal serums.

*From the Children's Hospital of Michigan. Read before the Pediatrics Section of the Michigan State Medical Society at the 112th Annual Meeting at Kalamazoo, September 14, 1932.

†Dr. Martmer is Assistant Professor of Pediatrics, Detroit College of Medicine and Surgery. He is Attending Pediatricist to the Children's Hospital of Michigan.

Ramon and Illingworth, Zingher, Fitzgerald, Weinfeld and Cooperstock, Schwartz and Janney, and Dick and Dick have all published reports of the use of toxoid.

The severe local and general reactions that may occur with the use of diphtheria toxoid (anatoxin) have deterred many physicians from the general use of this preparation.

In 1928, Lowenstein produced an ointment containing diphtheria toxin modified by formaldehyde and dead diphtheria bacilli. He added the diphtheria organisms so as to produce not only an antitoxin immunity but an antibacterial action as well. This preparation was rubbed into the skin of guinea pigs. Later both the treated and control animals were given lethal doses of toxin. All of the control animals died and none of the treated animals suffered any ill effects.

Lowy, one of Lowenstein's co-workers, then used this ointment on 176 children and, in 1929 reported that 68% of those treated had become Schick negative.

Since the publication of Lowenstein's and Lowy's work numerous investigators have reported their results with this method of immunization.

Besredka experimented with rabbits and found it was possible to produce immunity by applying toxin to the skin after cutaneous friction. Schmidt used guinea pigs and was not able to produce immunity by the inunction of toxin. However, Jakopp and Streit reported good results following the use of the ointment but failed to give data as to the number of cases treated and the results.

In addition Lowenstein,¹ Lowy,² Baar and Grabenhofer,³ Siegel and Hassmann,⁴

M. Stransky,⁵ E. Nobel,⁶ Abt and Feingold,⁷ Kegel and Gasul,⁸ Baar and Hass, Blumenthal and Nassau,¹⁰ E. Urbanitzky¹¹ have reported series of cases and the results obtained.

CHART I

	Number of cases	Per cent Negative
Kegel and Gasul.....	47	55.3
Blumenthal and Nassau.....	157	65
Siegl and Hassmann.....	33	91
Baar and Benedict.....	110	67.7
Abt and Feingold.....	62	70.9
Urbanitzky.....	93	81
Lowenstein.....	500	68
Baar and Grabenhofer.....	203	67
Baar and Grabenhofer.....	203	75
Lowy.....	500	68
Artusi and Migliori.....	57	32

Examination of the figures given in Chart No. I reveals that the immunity produced by the use of Lowenstein's ointment varies from 55 to 80 per cent depending upon the time elapsing between the application of the ointment and the giving of the Schick test, as well as the size of the dose and number of applications.

In this group as a whole, 70.5 per cent were immunized, a figure which compares very favorably with the results obtained by the use of either toxin-antitoxin or toxoid.

The generally accepted theory is that a negative Schick test shows that a patient has about 1/30 unit or more of diphtheria antitoxin in 1 c.c. of blood serum. Lowenstein and many other investigators, however, feel that a negative Schick reaction does not always mean complete immunity to diphtheria.

To further evaluate the usefulness of the percutaneous method of immunization, studies have been carried on by Baecher and Loewenstein. Their results show that following the application of Lowenstein's ointment a definite increase in antitoxin content of the blood results. The quantity varies from 1/20 to 1 unit per cubic centimeter.

Encouraged by the published results concerning the use of Loewenstein's ointment, an investigation is being carried on at The Children's Hospital of Michigan Convalescent Home at Farmington, Michigan. At this institution the children remain for long periods of time, making it possible to complete an investigation of this type.

All patients immediately upon admission to the City Hospital are Dick and Schick

tested before being transferred to Farmington. As soon as they are transferred to Farmington, all Schick positive individuals receive five doses of Lowenstein's ointment at intervals of two days. Once a month all patients having a positive Schick reaction are retested. If at the end of six months the reaction is still positive a second course of ointment is given. Likewise all positive Dick reactions are given five applications of scarlet fever toxin ointment. This work will be reported in the near future.

Method of Application of Lowenstein's Ointment.—The patient's back was washed with soap and water, dried thoroughly and then sponged with seventy per cent alcohol. After wiping off the excess alcohol, the back was allowed to dry before applying the material. The contents of one tube of ointment was applied to the cleansed surface and thoroughly massaged into the tissues by the hands. A rubber glove was worn by the nurse to facilitate the work and prevent any loss of material by absorption into her own hands.

Sufficient time has elapsed following treatment to make a preliminary report covering the past year. The cases have been divided into two groups designated as Series A and B.

CHART II

<i>Series A</i>	
Total number treated.....	58
Total number Schick negative.....	41
Per cent Schick negative.....	70 per cent

Series A consists of fifty-eight children who were Schick positive before being immunized. After six months forty-one or 70 per cent had become Schick negative.

CHART III

<i>Series B</i>	
Total number treated.....	54
Total number Schick negative.....	47
Per cent Schick negative.....	87 per cent

Series B consists of fifty-four children (age one to ten years) who were not Schick tested before being treated. After six months forty-seven, or 87 per cent, were Schick negative.

To determine the rapidity with which immunity develops tests were made at monthly intervals following the application of the ointment.

CHART IV

Series A		58 Cases	Per cent
16	Negative	1 Month	27.6
23	Negative	2 Months	39.3
31	Negative	3 Months	53.4
33	Negative	4 Months	56.9
35	Negative	5 Months	60.0
41	Negative	6 Months	70.0

Chart IV shows the number of children negative at the expiration of one to six months following treatment and the corresponding percentages.

CHART V

Series C	
Total number treated.....	57
Total number Schick negative.....	47
Per cent Schick negative.....	82.4 per cent

Series C is made up of a group of children (age one to three years) who were Schick positive before being treated.

These children received five applications of ointment with an interval of five days between doses.

In this series forty-seven or 82.4 per cent were Schick negative after six months.

Combining the three series (A, B, and C) a total of 169 children were treated and after six months 133 or 78.7 per cent were Schick negative.

The results obtained in the three series compare very favorably with the results reported following the use of toxin-antitoxin and toxoid.

From a survey of the literature covering this method of immunization and the results obtained to date in this study further investigation is warranted.

A more widespread use of this method of immunization seems justified for several reasons.

1. It is a simple, safe, practical and expedient method.

2. The results compare favorably with other methods in use.

3. Protein sensitization is avoided.

4. The danger of free toxin entering the system is eliminated.

5. Constitutional reactions are avoided.

6. The psychic element of hypodermic medication is eliminated.

The writer wishes to acknowledge his indebtedness to Dr. Thomas B. Cooley for his valuable advice and aid in the preparation of this paper; to Dr. E. A. Sharpe, Director of Experimental Medicine, Parke, Davis & Company, who furnished the material, and to Miss M. A. Rogers, Superintendent, and Miss A. Lienemann, Assistant Superintendent, of The Children's Hospital of Michigan, as well as the nursing staff, through whose coöperation this study was made possible.

749 DAVID WHITNEY BUILDING.

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CHEMOTHERAPY OF AMEBIASIS

Evidence presented by Chauncey D. Leake, San Francisco, indicates little hopefulness of finding an ideal agent among the kurchi or ipecac alkaloids, since the former seem too ineffective and the latter too dangerous in effective doses. Insufficient data are at hand to evaluate properly the place of the alkyl resorcinols in the therapy of amebiasis, but they deserve full investigation. As a result of their clinical success, bismuth salts also merit attention. Even a hurried experimental survey of the halogenated oxyquinolines indicates that at least one other compound in this group (iodochloroxyquinoline, or Vioform, N. N. R.) is likely to prove much better in amebiasis than the only one of the series so far attracting attention (sodium iodoxyquinoline sulphate, or Chiniofon, N. N. R.). Indeed, vioform

is the most efficient drug of any type examined so far in monkey amebiasis, and there is no indication of toxicity in its therapeutic range. Likewise, among the organic arsenicals it is obvious that experimental search already reveals compounds of this type better than the only one in the group (acetarsone) so far awarded clinical consideration. Indeed, controlled clinical trial of 4-carbamino-phenyl-arsonic acid ("Carbarsone"), based on fair preliminary experimental data, indicates its superiority to any amebicide in ordinary use, especially in its marked effectiveness in nontoxic doses. In comparison with other chemical types of amebicides, the organic arsenicals are significant in manifesting a general "tonic" effect, difficult to evaluate experimentally, but clearly evidenced clinically. But they may exhibit toxic effects which make it expedient to employ them cautiously.—*Journal A. M. A.*

A NEW METHOD OF SKIN GRAFTING*

C. V. RUSSELL, M.D.

LANSING, MICHIGAN

Methods of skin grafting have not changed in nearly half a century. A great industrialist has said that any method which has not changed in 20 years is obsolete and can be done a better way. More important than the method of skin grafting is the time of doing it, that is, when the defect is ripe to receive grafts. Results of skin grafting are unsatisfactory not so much because surgeons cannot recognize the proper time, but because they procrastinate, join the Manyana club, in view of the vexing half hour, of doing it with present methods. I plead guilty to the implication myself; therefore, a simpler method is greatly to be desired.

You may at first think it preposterous to offer a method which employs no surgical instruments and, instead of placing 20 or 30 grafts, places many hundreds in much less time; a method which requires no anesthetic and which leaves no scar on the part from which the grafts are taken, making homo-grafts from the forearm feasible in most cases.

I wish this paper to make a record for brevity, but before going on to the method, which will require but a moment, I want to call attention to a widely accepted fallacy, namely, that the outer layers of cells just below the surface of the skin will not grow as grafts. A moment's consideration establishes the epithelial cell as the hardest cell of the body. Carrel, I believe, has seen them

grow in nutrient media and John Woodbury at Roosevelt hospital, many years ago, grafted parings from corns on varicose ulcers with spectacular success.

In conclusion, the method, as most of you have by now surmised, is to use an abrasive surface. The homely, medium coarse sand paper of the carpenter does very well. It may be dry, sterilized and rolled into a cylinder. With the prepared forearm held adjacent, as it may be, to any part of the body, the cylinder of sandpaper is quickly scuffed across the forearm causing the fine fragments of skin cells to be implanted on the defect, like salt from a shaker. At the malpighian level, a burning sensation is produced and the cylinder is advanced. The dressing of the grafted surface will vary with the surgeon. We favor compression with gauze, using perforated cellophane directly over the grafts.

*Read before the Surgical Section of the Michigan State Medical Society at the 112th Annual Meeting at Kalamazoo, September 15, 1932.

RECENT FACTS ON TRANSMISSION OF TUBERCULOSIS

J. Arthur Myers, Minneapolis, deprecates the fact that students of medicine and nursing are being left with the impression that it is a good thing to come in contact with patients suffering from tuberculosis and receive just the right dose to give them a positive tuberculin reaction. Under such conditions the dosage is entirely uncontrolled. The number of bacilli which the student's body receives from contact with tuberculous patients may vary from a few to huge numbers. Where careful observations have been made in this country, it has been shown that approximately 30 per cent of the probationers in schools of nursing react positively to the tuberculin test but, after they have taken tuberculosis services, from 80 to 100 per cent have been found to react positively. Since a positive reaction indicates an allergic state and since there is reason to believe that the destructive phase of tuberculosis is brought about by the allergic reaction, it would seem obvious that nothing but harm has been done by allowing students to take unmeasured doses of tubercle bacilli

into their bodies and develop a state of allergy. But what immediate evidence is there that allergy is dangerous to the students? The best evidence is that from 5 to 12 per cent of student nurses have presented themselves with tuberculous disease that required treatment soon after allergy was manifested by a positive tuberculin reaction. Pleurisy with effusion is looked on as one of the early manifestations of tuberculosis. In itself, it is an allergic reaction. Many patients are desperately ill from it over a considerable period of time. Abundant clinical experience has taught that pleurisy with effusion is frequently followed by pulmonary tuberculosis of the destructive type. Therefore, in the light of such evidence, who will dare state that an allergic reaction, as manifested by the tuberculin test and brought about by exposure to human beings suffering from tuberculosis is of benefit to a student? The author desires to leave the answer to the reader and to the students themselves as to whether exposure of students to tuberculous patients should be allowed to continue or whether it should be prevented by the adoption of an adequate contagious technic.—*Journal A. M. A.*

MICHIGAN'S DEPARTMENT OF HEALTH

C. C. SLEMONS, M.D., DR.P.H., Commissioner
LANSING, MICHIGAN

PSITTACOSIS

A fatal case of psittacosis was reported from Coloma in September. A family purchased a pair of parrakeets from an itinerant peddler who stated that the birds were raised in California. One of the birds died the day following its purchase. About three weeks later a member of the family became ill, and a diagnosis of psittacosis was made. The other bird appeared well, but after the death of the patient it was killed. Organs taken from the body of this bird were ground and injected into mice which developed typical psittacosis lesions.

A number of cases of the disease have occurred in other states recently and have been reported to the U. S. Public Health Service. Consequently, revised interstate quarantine regulations have been issued by the U. S. Public Health Service, which provide that no birds of the parrot family shall be shipped in interstate commerce except those accompanied by a "certificate from the state health authority to the effect that to the best of the knowledge and belief of such authority such bird as may be offered for shipment has originated from an aviary, or other distributing establishment, free from psittacosis infection."

The Michigan Department of Health will require all dealers handling birds of this kind to keep an accurate record of all birds purchased, with the details of where purchased and from whom and the date; also to keep an accurate record of all birds sold, to whom sold, name, address, and date of sale. This requirement is to provide for the possibility of tracing any birds concerning which there may be any question of psittacosis.

IMMUNIZATION IN STATE INSTITUTIONS

On recommendation of the Michigan Department of Health to the Department of Welfare, a number of the state institutions are now immunizing inmates and employees against typhoid, diphtheria and smallpox. Some of the institutions had already made it a practice to protect inmates and employees

against one or more of these diseases. It is the present recommendation that all institutions do so.

Recently the Traverse City State Hospital completed immunization against typhoid and Schick testing and immunizing of positives for diphtheria. Smallpox vaccinations have already been taken care of. Likewise, the Pontiac State Hospital is busy immunizing, and other institutions are preparing to do so.

COMMUNICABLE DISEASE NOTES

On the whole the communicable disease situation for this season of the year is quite favorable. The downward trend of diphtheria continues and the incidence has established a new low level.

Scarlet fever continues high, being a little above the normal for this time of the year.

Whooping cough remains fairly high, being a little lower than it was earlier in the season but a little higher than the five year mean.

Poliomyelitis is considerably below the usual incidence. The outbreak of this disease last year was the most severe in the history of Michigan. Convalescent serum has been furnished by the Michigan Commission on Infantile Paralysis for the few cases this season.

Measles has about reached the minimum following the high peak of early summer. The year will probably show the greatest number of cases ever reported as the total has now about reached that of the record year 1926.

Typhoid fever incidence has been very high this year. There have been several local outbreaks. It is now declining.

C. D. B.

LABORATORY NOTES

Twelve laboratories in the Upper Peninsula were visited during the month of September in the interest of standardizing their methods of procedure.

Seven students from Michigan State College and one from the University of Michigan are in training in the Department laboratories in Lansing, doing routine public health laboratory work.

CHILD HYGIENE

Two new series of women's classes have been started in Berrien and Sanilac counties with an enrollment of 2,709.

Child care classes are being conducted in Presque Isle, Cheboygan, Ogemaw, Iosco, Baraga and Houghton counties with an attendance of 3,917.

Bertha Wellington, who replaced Helen Linn on the staff as nutritionist, is working in Jackson county with mothers of young

infants. She will continue this work until she begins her work with the women's classes in Livingston and Oakland counties in November.

During the month of September representatives of the Bureau of Child Hygiene and Public Health Nursing made 46 visits to prospective mothers, 23 postnatal visits, 75 visits of instruction in infant care and 26 visits in the care of the pre-school child. There were 180 visits made to infants under six months of age in connection with breast feeding campaigns. Letters to prospective mothers totalled 3,424, and 6,859 certificates of registration of birth were distributed to parents.

DEVELOPMENTS IN THE PROBLEM OF ARTHRITIS

In his review of this subject, RALPH PEMBERTON, Philadelphia (*Journal A. M. A.*, Jan. 3, 1931), stresses the fact that attacking this problem with any drug or any vaccine alone is too often like firing at the head above the ramparts instead of at the fortification itself. In the opinion of most of the American committee for the control of this disease, it is of the first importance to envisage the disease as a whole instead of focusing on any factor, be it mechanical, bacteriologic or nutritional, which may merely precipitate it. In arthritis a variety of factors contributes to bring about the disease. No agency or organism is recognized by the American Committee for the Control of Rheumatism as the single cause of it, and no drug, vaccine or any single form of therapy can alter the hereditary or constitutional make-up, the faulty anatomy or physiology of the intestinal tract or the deranged metabolism secondary to the disease, perhaps sometimes underlying it. There is probably no other consideration before the medical profession more important in terms of persons now living than that of seeing this problem whole. Even irregular practitioners are now beginning to treat these sufferers with a breadth of view which some of the leaders of medicine do not entertain. The medical profession as a whole is not much more immune from prejudice of single-minded enthusiasm than are those who constitute it. Is it to allow to be repeated here the experience in the field of physical therapy in which the layman and the quack, almost alone, kept alive therapeutic principles rediscovered fifty years later by orthodox medicine? The problem of arthritis is unrolling and developing before the eyes of the medical profession. Should not physicians highly resolve to catch up with and keep abreast of this evolution and extend its fine possibilities to the hosts of arthritic patients in this country? It is of importance to learn more concerning this protean disease, but it is even more important for the generations now living that the profession learn more of what is already known about it. Orthopedic surgeons have gone afield in the past to atone for much neglect and mismanagement on the part of others. Their help may be equally necessary in the better mapped and brighter future.

CLINICAL STUDY OF ASCARIASIS

A. E. Keller, Horton Casparis and W. S. Leathers, Nashville, Tenn., studied the clinical conditions found in 107 cases of ascariasis in white children and in 60 cases in Negro children, with 54 white controls and 69 Negro controls. A history of disturbed sleep was obtained in 60 per cent of the cases in white children and in only 15 per cent of the white controls, while in only 20 per cent of the Negro patients and 22 per cent of the Negro controls was this complaint present. Abdominal discomfort was present in 70 per cent of the white patients and in only 7.4 per cent of the white controls. It was present in 60 per cent of the Negro patients and 30 per cent of the Negro controls. The physical conditions were those which can be demonstrated in any average group of rural children. Protuberance of the abdomen was present in 60 per cent of the white patients and in 22.2 per cent of the white controls. It was present in 33.3 per cent of the Negro patients and in 23.3 per cent of the Negro controls. There were no significant changes in the total red blood cell counts, hemoglobin or total leukocyte counts in the cases and controls as groups. The differential leukocyte counts revealed an average eosinophilia of 8.9 per cent for the white patients and 5.3 per cent for the Negro patients. Both white and Negro controls had eosinophil counts which varied from zero to 10.5 per cent. The average eosinophil count, however, for both control groups was 2.9 per cent, which is considered normal. The eosinophilia does not appear constantly in cases of ascariasis, 16 per cent of the white patients and 31.6 per cent of the Negro patients showing an eosinophil count of 3 per cent or less. No definite correlation between eosinophilia and the intensity of infestation could be demonstrated. No correlation between the age of the patient and eosinophilia could be shown. This analysis presents few observations on which a clinical diagnosis of ascariasis may be based. The parasite causes abdominal discomfort and disturbed sleep. That the parasite causes some disturbance in the host is seen by the presence of eosinophilia. The negative clinical observations that are presented emphasize the importance of the routine examination of feces in a diagnosis of ascariasis.—*Journal A. M. A.*

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Contributors are responsible for all statements, conclusions and methods in presenting their subjects. Their views may or may not be in agreement with those of the editor. The aim, however, is to allow authors as great latitude as the general policy of The Journal and the demands on its space may permit. The right to reduce in length or to reject any article is reserved. Articles are accepted for publication on condition that they are contributed solely to this Journal.

All communications regarding advertising and subscriptions should be addressed to F. C. Warnshuis, M.D., 2642 University Avenue, St. Paul, Minnesota, or Suite 1508 Grand Rapids National Bank Bldg., Grand Rapids, Michigan.

December, 1932

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon

EDITORIAL

THE SEASON'S GREETINGS

This number of the Journal marks the close of 1932. It goes out conveying the season's greetings of the President, President-Elect, the Council, Publication Committee, Secretary of the Michigan State Medical Society and the Editor.

The year which began with apprehension is about at an end. It has been a year of progressive retrenchment, of tightening the belt for many, perhaps the most of us. However, we are heroically learning the les-

son that happiness and satisfaction, if we are to attain them, do not consist entirely in material things. We still retain those friendships without which life would be very barren. The editor has welcomed the opportunity of the month to month contact with the members of the society through these pages and appreciates the numerous expressions of commendation both oral and written that have come to him.

The aim of the Journal is to unite the membership of the society in a common cause. Never before in the history of Michigan medicine or in the thirty years of this Journal's existence, has the profession been so beset with external factors which threaten our very existence to serve the public. What these influences are it is not necessary to repeat; they are only too keenly felt by all.

The Journal is the organ of the Society as a whole, containing, as occasion makes possible, the deliberations of the President, the House of Delegates, the Council and the Executive. All are giving the problems of the profession the most thoughtful consideration. The editorial department contains discussions on subjects we hope are of timely importance. An endeavor is made from month to month to publish papers of scientific interest which contain valuable and up-to-date information on the subjects chosen by the various writers.

The medical society provides a protective feature under the direction of the Medico-Legal Committee which no one in the active practice of his profession can afford to be without for one moment. Only a short time ago the editor met an old acquaintance who was not a reader of this Journal (there are many such among us). He said he could not afford it as the society dues in his county amounted to twelve dollars. He knew he was taking chances but he couldn't help it. Under the advice of the Medico-Legal Committee the members have been urged not to let their membership lapse. But of course the warning does not reach those who are not members and do not take the Journal, hence the importance for those who are members to see that every eligible physician is prevailed upon to become a member of his county society. There are no more important organizations for a professional man than the societies that minister to his professional needs. He requires that protection which is afforded by a united sympha-

thetic professional group whether he be a physician or dentist or lawyer. In his practice he is kept from pursuing fads in medicine and stimulated by the *esprit de corps* of his associates.

RAY C. STONE, M.D.

The relinquishment of life by Ray C. Stone, M.D., of Battle Creek, creates a loss to our state profession that is regrettable and difficult to compensate. A Councilor for



RAY C. STONE, M.D.

nine years, Chairman of the Council for four years, an ex-president, a surgeon of high standing, a character of sterling quality, a contributor to human and community advancement, Dr. Stone exemplified a life and a labor that inspired admiration and evoked respect. He gave of self to develop and uphold our honored traditions. He served his community and his fellow physicians sincerely, honorably and unselfishly. He achieved for the good of all. He contributed to a large degree to make possible the observation and application of all our medical principles and standards. His departure creates a distinct loss.

For many years to come we shall benefit by reason of his life and labors. He will be missed in our councils and in our activities.

We shall ever honor his memory. We shall be long in forgetting the wholesome influences he exercised. We retain for all time in our archives his faithfulness to his profession and its ideals.

Shall we not remember at this time: "Wherefore for us when real men die, shall be no mournful graveward glance. Our souls with theirs invade the sky, and to immortal strifes advance. For great is our inheritance when real men die." And so, Ray, hail and farewell! Your sun of life has set as sets the morning star which goes not down in a darkened west, but fades away in the glorious light of Heaven!

F.C.W.

THE JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY

This JOURNAL is three decades old. Thirty years, thirty times twelve, three hundred and sixty numbers of this JOURNAL have gone forth to the members of the Medical Society. When the first number, Volume I, appeared, many now practising were yet unborn; some were in swaddling clothes and many physicians then in their prime long since have been gathered to their fathers. Up to and including 1901, the various papers read before the annual meeting of the Michigan State Medical Society were published in the form of a volume of transactions. The volume for 1900 including membership lists made up 546 pages single column. In the month of September, 1902, Volume I, No. 1, of this JOURNAL appeared. The page of two columns was 6x9 inches. The increase in size of the JOURNAL is a fair indication of the growth in members of the Michigan State Medical Society. Volume 30, that is the complete volume for 1931, contained 980 pages, 10½x7½ inches. The second volume (1903), which was the first complete yearly volume, contained 635 pages. The editor was Dr. Andrew P. Bidle of Detroit, and the business manager Dr. S. Edward Sanderson, likewise of Wayne County. The JOURNAL made its bow with this statement: "It is unnecessary to enumerate the many advantages of a monthly JOURNAL over the annual transactions for a place of record of the doings of the Society. One of the principal ones, however, will be the opportunity it affords

to the officers of the Society to come into more intimate and frequent touch with the members, and to the members to present their views, for we wish it understood that we invite to its columns all honestly expressed opinions. . . . We enter the field of

additional reasons for the existence of a state medical journal in this state. Whether he doubted the usefulness of such an institution or not, in his editorial of October, 1903, he speaks of having written a number of prominent medical editors in the United



Dr. Andrew P. Biddle
Editor, 1902-1906



Dr. Benjamin R. Schenck
(1872-1920)
Editor, 1906-1910



Dr. Wilfrid Haughey
Editor, 1910-1912



Dr. F. C. Warnshuis
Editor, 1912-1927

FORMER EDITORS, JOURNAL MICHIGAN STATE MEDICAL SOCIETY

journalism simply as a better ground to plant the seeds of common interests and to reap the benefit of closer acquaintance. We enter with no feeling of rivalry nor competition and to those journals already here which have in the past graciously recorded the doings of the Society we express our sincere wishes for their continued success."

At the time, Dr. Leartus Connor was President of the Michigan State Medical Society and the opening articles of the September and October JOURNAL, 1902, consist of Dr. Connor's President's Address. The subject was "The Michigan Medical Society—Its First Eighty-Three Years, Present Wants and Suggestions for Their Supply." Many of the contributors to the first volume have since passed to their reward, but a number of them, namely Dr. Angus McLean, Dr. John E. Clark, Dr. Walter R. Parker, Dr. Irving H. Neff, Dr. George Dock, Dr. Richard R. Smith and Dr. W. H. Haughey, are very much alive and engaged in the active practice of their profession.

About a year later the editor indulges in

States to ascertain their views as to the usefulness of the state journal. The consensus of opinion was that "there is a distinct field for medical society journalism." And in general agreement such a journal should publish the transactions of the state and the affiliated local societies. The conclusion was that more than half the education of a physician was derived from association with his colleagues. One function of the JOURNAL, therefore, was to preserve scientific papers read at the meeting for permanent record and perusal at leisure; the JOURNAL should keep the profession of the state fully informed as to the doings of boards of health, boards of examiners, state institutions and all other medical or semi-medical institutions of the state. Secretaries of the various county societies were to constitute a reportorial staff for the JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY.

Evidently the kidney constituted a very large subject of investigation at the opening of the century. In the first number of the JOURNAL practically all papers presented are

on some phase of kidney disease. The subjects as a whole are rather broad in their scope as compared with the treatment of the same subject today. For example, Volume 1, No. 1, contained the following subjects, Etiology of Kidney Disease, Diagnosis of Diseases of the Kidney, Uremic Complications to Diseases of the Kidneys, The Cerebral Complications of Kidney Disease, the Treatment of Diseases of the Kidney. The following number of the JOURNAL contains five papers out of eight on some phase of kidney disease.

Dr. Biddle became a member of the Michigan State Medical Society in 1894. He has maintained his interest in the Society right up to the present time. Dr. Biddle is a dermatologist. He is a graduate of the Detroit College of Medicine. He was general secretary of the Michigan State Medical Society from 1900 to 1906 and was the first editor, as stated, from 1902 to 1906. Dr. Biddle was President of the Michigan State Medical Society 1916-18. He was succeeded by the late Dr. Benjamin R. Schenck, a graduate of Johns Hopkins University, who limited his practice to obstetrics and gynecology. Dr. Schenck was secretary-editor of the Society until 1910, when owing to ill health he was compelled to retire both from practice and from the editorship of the Journal. He went west, where he died of tuberculosis. Dr. Schenck was succeeded by Dr. Wilfrid Haughey of Battle Creek, who was secretary-editor 1910-12. Dr. Haughey graduated from the University of Michigan A.B. in 1904, M.A. University of Detroit, and M.D. Detroit College of Medicine 1906. He was succeeded by Dr. F. C. Warnshuis, who held the position as secretary-editor until the joint office was separated in 1927, since which time he has acted as secretary and as business manager of the Journal. Dr. Warnshuis it is seen was editor for a period over twice as long as any other person who has held the position. In this number of the Journal will be found timely letters from the surviving former editors.

The JOURNAL was at one time printed by the American Medical Association. About the year 1914 it was printed in Grand Rapids, where it continued to be printed until three years ago, when the contract for printing was given to the J. R. Bruce Publishing Company of St. Paul, Minnesota, whose im-

print the Journal bears at the present time. The advertisement income, which was about \$1,800 twenty years ago, has been increased to a yearly average of \$8,000. The JOURNAL has to within recent months shown a profit, which has been turned over to the Society's reserve fund. The chief source of revenue of any publication is its advertising pages. A concerted determination on the part of members of the Society to patronize those firms who advertise in the JOURNAL would not only help the advertiser in disposing of his product but also the doctor, inasmuch as the commodity advertised is of dependable quality. And imagine what it would mean to the JOURNAL. The JOURNAL is published under the direction of the Council of the Society, from whom a publication committee is selected for the immediate enunciation of the editorial policy.

The preparation of the JOURNAL each month has demanded unremitting care and effort on the part of the editors, on whom has devolved the work of selecting papers—often, particularly in the earlier years, endeavoring to provide them when they were none too plentiful—of reading and editing typewritten copy, revising proofs, of writing editorials and chronicling worthwhile events, as well as the deliberations of the Council and House of Delegates, all a task more or less arduous when it is considered that to each of these men editing the JOURNAL was an avocation carried on along with his daily professional duties. In addition the editor must be a lover of good reading matter even on subjects which might seem but remotely related to the practice of medicine, for he must cultivate and maintain a literary style, as important to him as the daily practice of music to a musician or the disciplining which approximates perfection in any other human venture.

Dear Doctor Dempster:

Complying with your letter request for a brief comment on the occasion of the Journal's 30th Anniversary I would be remiss did I fail to first congratulate you and the Society upon having such an excellent publication. Our Journal is in each issue a credit to the Society and its Editor.

To me the Journal has always been our "House Organ." It is published primarily for the benefit of every member. It is our medium for disseminating scientific infor-

mation and according professional assistance. Next it initiates and comments upon essential policies and principles in accordance with the actions of the House of Delegates and the Council. It thus seeks to inspire and maintain organizational unity and action. Editorially it imparts medical and economic problems and indicates their influence and effect upon the practice and services of the members. Further, the Journal serves as a medium of historical record and Society progress through the publication of minutes, committee reports and other organizational activity. Lastly it records outstanding events and achievements on the part of component units and members. All these and other features cause our Journal to be a most valuable feature of membership.

Our Journal is limited in extending these features by financial restrictions. The prorated portion of our annual dues defrays but half of the annual publication costs. The balance is obtained through advertising income. Were it not for this annual income it would be necessary to fix a subscription price of \$7.00 and increase membership dues \$5.00 per year. Advertising income is dependent upon the advertiser's return upon his advertising investment. The Journal income could and would be increased and a bigger, more inclusive publication would be made possible if our members would give preference to our advertisers in their business dealings. Hence it rests with the membership whether our Journal shall be enlarged to embrace the wider fields of medical journalism and become still more valuable to every member, or if by reason of membership disinterest in our advertisers the Journal shall be restrained to its present scope.

With the Society's national reputation for achievement it is not too much to expect, casting aside a mere wish, that these ends will be a near future attainment. May we all achieve to secure that realization. Doing so will cause us to profit and have still greater pride in our Journal.

F. C. WARNSHUIS.

October 27, 1932.

Dear Doctor Dempster:

In reply to your request that I make a few comments on the problems and condi-

tions which confronted us as the first Editor of the JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY as compared with those which confront you today, I am glad to do so.

You, as Editor, will understand that these problems are manifold. It is not only the physical labor of garnishing the work of others for presentation in an orderly manner but the more serious matter of interpreting and voicing the consensus of opinion of the profession; of adding your force and voice to the advancement of medical science and art; of ever upholding and conserving the dignity of the profession; of guiding it in its relation to its own membership, its patients and the public; of watching and fostering organized medicine; of helping to safeguard medical practice acts by constant vigilance and willingness to appear before legislative committees and bodies. These problems you have to meet today as we did thirty years ago.

As you will recall, the problems which confronted us as we entered into our first publication concerned the re-organization of all State Medical Associations along the lines of the County Medical Society as a unit as propounded by the American Medical Association; which re-organization has strongly united the whole profession, strengthened it not only within itself but before the bar of American public opinion.

Coincident with this have been the advancement of medical education; the elimination of unworthy medical schools; the placing of medical education and the hospital under the watchfulness and guiding hand of the whole profession as represented in the membership of the American Medical Association.

The almost unbelievable advances in medicine, surgery and the specialties, as familiar to you as to all of us, but renders your task of discrimination the harder. We drove with the horse and buggy, usually leisurely, though sometimes the horse balked. You drive the automobile with its vast power, usually at high speed, never without its danger.

But beyond this you have the task of interpreting the meaning of the present day social unrest, which cannot but affect the historic relationship of the physician to his patient, of the patient to the hospital in the cost of medical care.

Thirty years ago we were engaged in the building of the profession into a whole; you, today, must be alive in the support of this structure, in strengthening it lest it becomes less cohesive and crumbles. To our mind your task will require all the wisdom gained from your own experience and the interpretation of the experiences of others; all your physical and moral strength; for upon you as Editor has been placed a responsibility as heavy if not heavier than that which confronted the Editor of yesterday.

ANDREW T. BIDDLE.

November 1, 1932.

Dear Doctor Dempster:

I thank you for your invitation to say something to the Medical Profession of Michigan through the Journal. During the years when I was Editor that task came regularly and did not cause me as much thought, probably, as it does now.

There is only one thing to which I wish to draw particular attention. I believe there is a very great need now, and has been for a number of years, of a course in our medical schools teaching the young man how to run his office; how to meet and handle his patients, the value of his services and how to get it.

I think this course should be in the nature of a lecture course conducted by lectures from successful practitioners throughout the state rather than by members of the faculty. I think there is a distinct need for something of this nature.

I am pleased with the journal as it has developed and I am glad to have had something to do with its development. I wish to take this opportunity to thank the profession for having granted me that opportunity.

WILFRED HAUGHEY.

November 2, 1932.

THE COMMITTEE ON THE COST OF MEDICAL CARE PRESENTS FINAL REPORT

On November 30, 1932, appeared the final report (publication No. 28) of the Committee on the Cost of Medical Care for the American people. It bears the imprint of the University of Chicago Press. The Committee on the Cost of Medical Care

was, as is well known, inaugurated in the spring of 1926. The personnel consisted of representatives from private practice, including fourteen medical doctors and two dentists; institutions and medical interests were represented by six medical doctors, two Doctors of Philosophy, two registered nurses and one pharmacist; public health was represented by four physicians, one Doctor of Public Health and one layman; the social sciences by six Doctors of Philosophy; the public by five laymen and one Doctor of Science, one Doctor of Laws and one Doctor of Philosophy. After five years, during which time twenty-seven brochures on different phases of the work have appeared, we have the final report, which appears to be fairly exhaustive. The time before going to press does not permit an analysis of the contents of this report, which we hope to present in the January Number of this Journal. In the meantime, however, we give here the recommendations of the *Committee* and also recommendations of the *minority group*. Supporting the minority group are seven medical doctors, members of the Committee, the two dentist members, one Ph.D. and one layman.

RECOMMENDATIONS OF THE COMMITTEE

I

The Committee recommends that medical service, both preventive and therapeutic, should be furnished largely by organized groups of physicians, dentists, nurses, pharmacists, and other associated personnel. Such groups should be organized, preferably around a hospital, for rendering complete home, office and hospital care. The form of organization should encourage the maintenance of high standards and the development or preservation of a personal relation between patient and physician.

II

The Committee recommends the extension of all basic public health services—whether provided by governmental or non-governmental agencies—so that they will be available to the entire population according to its needs. This extension requires primarily increased financial support for official health departments and full-time trained health officers and members of their staffs whose tenure is dependent only upon professional and administrative competence.

III

The Committee recommends that the costs of medical care be placed on a group payment basis, through the use of insurance, through the use of taxation, or through the use of both these methods. This is not meant to preclude the continuation of medical service provided on an individual fee basis for those who prefer the present method. Cash benefits, i.e., compensation for wage-loss due to illness, if and when provided, should be separate and distinct from medical services.

IV

The Committee recommends that the study, evaluation, and coördination of medical service be con-

desired important functions for every state and local community, that agencies be formed to exercise these functions, and that the coordination of rural with urban services receive special attention.

V

The Committee makes the following recommendations in the field of professional education: (A) That the training of physicians give increasing emphasis to the teaching of health and the prevention of disease; that more effective effort be made to provide trained health officers; that the social aspects of medical practice be given greater attention; that specialties be restricted to those specially qualified; and that postgraduate educational opportunities be increased; (B) that dental students be given a broader educational background; (C) that pharmaceutical education place more stress on the pharmacist's responsibilities and opportunities for public service; (D) that nursing education be thoroughly remoulded to provide well-educated and well qualified registered nurses; (E) that less thoroughly trained but competent nursing aides and attendants be provided; (F) that adequate training for nurse-midwives be provided; and (G) that opportunities be offered for the systematic training of hospital and clinic administrators.

RECOMMENDATIONS OF THE MINORITY GROUP

I

The minority recommends that government competition in the practice of medicine be discontinued and that its activities be restricted (a) to the care of the indigent and of those patients with diseases which can be cared for only in governmental institutions; (b) to the promotion of public health; (c) to the support of the medical departments of the Army and Navy, Coast and Geodetic Survey, and other government services which cannot be because of their nature or location be served by the general medical profession; and (d) to the care of veterans suffering from bona fide service-connected disabilities and diseases, except in the case of tuberculosis and nervous and mental diseases.

II

The minority recommends that government care of the indigent be expanded with the ultimate object of relieving the medical profession of this burden.

III

The minority joins with the Committee in recommending that the study, evaluation, and coordination of medical service be considered important functions for every state and local community, that agencies be formed to exercise these functions, and that the coordination of rural with urban services receive special attention.

IV

The minority recommends that united attempts be made to restore the general practitioner to the central place in medical practice.

V

The minority recommends that the corporate practice of medicine financed through intermediary agencies be vigorously and persistently opposed as being economically wasteful, inimical to a continued and sustained high quality of medical care, or unfair exploitation of the medical profession.

VI

The minority recommends that methods be given careful trial which can rightly be fitted into our present institutions and agencies without interfering with the fundamentals of medical practice.

VII

The minority recommends the development by state or county medical societies of plans for medical care.

THE NOVEMBER JOURNAL

The November number of this Journal is probably the most expensive to publish of any single number during the year. The reason is apparent. This number contains, among other things, the stenographic report of the proceedings of the House of Delegates at the Annual Meeting in September. The Council of the Society have each year gone to considerable expense as well as pains to present an accurate report of the discussions of the chief deliberative body of the Society. Everything that has taken place in the House of Delegates is reported. It is hoped that each member will read these pages very carefully for his own edification and instruction. The annual report of the council as well as the addresses of the President, President-elect are to be found in the November Journal. If you wish to know what your representatives in the State Medical Society have done and how carefully and conscientiously the council and President of the Society are serving you, the best account in existence will be found on pages 724 to 763. Of the utmost interest likewise is the address on The Service of the Profession by Dr. Olin West, Secretary and General Manager of the Journal of the American Medical Association. Many of us heard Dr. West deliver this address, not all, however. Those who have not heard the address will do well to read it since it vitally concerns the social life of every practitioner of medicine.

The November number contains also an excellent array of scientific papers that should appeal to our members along the lines of some special interest. Re-read the November number of this Journal.

HEREDITY

*My ancestors lie buried on a hill
High and green, and they lie in rows
Tucked in under the waving grass.
Why don't they stay there? Goodness knows!
But they steal behind me, their fingers poke
Into my business. What they want goes.
Aunt Maria she liked to scrimp,
Uncle Abner he liked to pray,
Fussy old Jonathan Pettiboe—
All of them try to boss the way
I live my life—Well, it can't be gay.*

*How can I call my life my own
When the scheming dead try to live through me?
How can I know what I really am
With their wishes hounding me greedily?
Though I think them dead, they're not, they live—
Parasites having their way with me.*

MEDICAL ECONOMICS

MEDICINE IN A CHANGING AGE

J. C. S. BATTLE, M.D.

PORT HURON, MICHIGAN

There is little doubt that the practice of medicine is being profoundly affected by the present economic depression. This is evidenced not only by a diminution in work and income but also by the fact that new types of medical practice have received a considerable impetus. More attention than ever before is being shown these movements in the editorial columns of the medical journals. It is not that they are an entirely new thing but that like a cancer an insidious growth in the economy of medicine has made itself apparent. More than one of our civilized institutions are under fire and may have to fight for their lives during the next decade. Medicine is one of them. Doctor John Lovett Morse, whose long years of outstanding service to the medical profession entitles his opinion to the highest respect, has recently said, "This country is rapidly tending toward state medicine. The federal, state and municipal authorities are continually taking over more and more of the functions of the family physician." State medicine and forms of contract practice are in the ascendancy. In that these things have appeared in European countries it may seem to many that their appearance here is in the long run inevitable.

There is always a tendency for subtle influences to so gradually alter the appearance of things that fundamental changes are consummated almost before one is aware. It is well in a time such as this to cast backward to medicine as it was in the days of our fathers before it became subject to the influence of the commercial atmosphere which today everywhere surrounds us. In my boyhood days, during the waning years of the last and the opening years of the present century, the trinity of minister, physician and lawyer loomed large among the household gods. The doctor, indeed, was in more intimate contact with his patients, and he held their confidence in a proportionately greater degree. He was a friend of the family and of its individual members. In times of need he was a counsellor in matters other than medical. For him the door stood always on the latch. In those days people were imbued with the virtue which marked the Victorian Age, that of taking life seriously, for life was not so easy then as it has been until quite recently.

My own mental picture of a physician was largely shaped by Sir Luke Fildes' painting, "The Doctor." It hung in my mind then as it hangs over my mantel now, the humble cottage, the sick child lying upon the chairs, the motherly despair, the fatherly helplessness, and the doctor the presiding genius of the scene. It typified then as it does now the personal relation between doctor and patient which is the keystone of the medical arch and without which the doctor cannot give the best that is in him. The personal relation of patient to doctor is the Aladdin's lamp from which all the amazing potencies of medicine spring. It is the thing which beautifies the medical life with significance.

It is a far cry from those times to present ones. Many changes have occurred in medical practice. The day of the old time doctor has gone never to return. The modern physician is in no wise his

counterpart. Increase in knowledge has made it impossible for him to handle the whole field of medicine well as did the doctor of past years. The advance in medical science which the last quarter century has witnessed requires some degree of specialization in training and equipment for its application. The physician of to-day, while he may be interested in the whole field of medicine, must follow some special bent if he is to do the best work. The patient of today, instead of expecting one doctor to see him through from the cradle to the grave, must accustom himself to seeking aid from more than one physician. The problem of making the newer knowledge available to the patient and of still maintaining the principle of personal relationship between patient and doctor has taxed the best medical intellect.

The natural evolution in things medical has been complicated by the appearance on the stage of modern business. The tremendous expansion of commercial interests has affected medicine as it has every other pursuit. It was inevitable for medical affairs to become tinctured with business methods. This has arisen both on the part of the profession and of the public. The flood has carried both groups along with it and confusion has arisen in which the distinction between a profession and a business has become blurred.

The essential difference between a profession and a business is that the former renders services while the latter sells commodities. While both, it is true, deal in something that satisfies human wants and which economist call a "good," the resemblance ceases here. The purveyor of commodities has no personal relation to the buyer except to receive his money and to deliver him his purchase. More often than not the article bought is made by a third party far in the distance who never comes in contact with the consumer. While it cannot be denied that the integrity of the salesman is an important factor, the quality of the goods he sells usually depends on the price charged for them. Services, on the other hand, are intangible offerings on which a fixed price cannot be set. They are wrapped up in the personality, integrity and training of those who offer them and they depend for their effectiveness on personal relationship. Moreover, the keynote of trade is competition, whereas the keynote of medicine is coöperation. Successful physicians, considered as success should be considered in medicine, never have been those who competed with their fellows for worldly gain. They have been those who helped the sick and furthered the progress of the medical art.

What are the business tendencies that have appeared in medical practice? They may be seen on the part of both patients and doctors. Many persons have come to think of the purchase of medical services as being on a par with the purchase of commodities. They demand an itemized account. They figure their bills for themselves at so much per visit. This confusion between the nature of two entirely different things leads to the deplorable habit of medical shopping and going where the price is lowest. The right of the doctor to set a higher fee for those in better financial circumstances is not recognized so much as it used to be. The patient may even go so far as to refuse to pay if results are not what he thinks they should be. He does not understand that from the nature of disease it is often impossible to receive the satisfaction he desires.

Doctors on their part have been obliged to establish rigid methods for collecting accounts. It is difficult for them to receive a reasonable return for their work when the patient's income is mortgaged for months ahead by time payments for all sorts of things. The notes of the automobile dealer must

be met but the doctor can wait. He has nothing that he can take back nor would he if he could. He is often forced to collect his money. This friction between doctor and patient makes a strange and unsatisfactory ending for what should be a happy relationship. It is difficult to see where these tendencies could have been avoided yet their subtle influence has undoubtedly paved the way for certain commercial ideas in medical practice.

The reflection of a commercial environment is seen in many developments that have taken place in the technic of medical practice. Business has gone into medicine in the establishment of clinics for the care of accidents and illness dependent on industrial occupations. Medicine has gone into business in the development of clinics to make practice more efficient for both doctor and patient and contract medicine has appeared, the purpose of which is primarily that of making profits. Life insurance companies make it their business to promote health and their nurses visit the homes of the insured. Life extension institutes enlist people in their ranks. Clinics of every variety, free and pay, have arisen to minister to human needs. A Chicago store has recently offered a certain type of medical service to the public through its mail order department. Without surveying these agencies in detail it is sufficient to emphasize what every physician knows to be true, that, laudable as many of them may be—and there are many that are not—they constantly encroach on private practice and tend to weaken the all-important bonds between patient and doctor. In addition to this the doctor's income is being lessened by these agencies. Free clinics offer services, often to those who should and could pay, which would otherwise be rendered by the doctor. Because they are free people often do not realize their value. There is a growing desire on the part of the public for free service and a growing concern on the part of physicians as they see their field constantly narrowed.

It will hardly be disputed that the present depression will accelerate changes which are occurring in medical practice. An increasing number of patients are being treated at the public expense and many who are not able to pay are receiving free private attention from doctors. Many of these will not wish to return to a pay basis. It will seem to them that illness over which they have no control should bear no more heavily on one than on another. Indeed, even if they should desire to return to a pay basis it may be difficult to do so. Although unemployment has been acutely felt during the depression, the fact is that it was on the increase during the preceding period of prosperity. Machines are more and more taking over the work of men. Men are more and more having to go through periods of lack of employment until they become adjusted to a new occupation. A certain amount of unemployment may become a permanent characteristic of the United States as it seems to have become in modern England. How are these people to be cared for medically? Is the medical profession to take on more and more charity work? Or are there other solutions? The idea may grow that it would be desirable to have some sort of state administered medicine. Private schemes of contract medicine may make their appearance in increasing numbers with an inevitable element of solicitation and advertising.

What form state medicine would take in the United States is at best entirely nebulous. Owing to differences in location and economic conditions it would be much different from European systems. Certain benefits to be derived may be dimly outlined but it should be said at the outset that prospective advantages always bulk larger than prospective disadvantages. State control of medicine would afford presumably an even distribution of the cost of medi-

cal care over the taxable population. It would result in a more even distribution of physicians than at present obtains. It would assure the placement of young well trained men and an immediate return on the investment made in training them. It would give the doctor welcome freedom from financial worries and relief from the annoyance of collecting accounts. It may be pointed out that the government is assisting more and more in private enterprise. If the supply of doctors should exceed the demand, if men on graduation should find themselves, as many are at present, with no place to go and without money with which to become established, and if doctors should have to accept aid from welfare agencies, as some have had to during the past winter, is it unreasonable to feel that a movement toward state medicine may appear?

In European countries whose civilizations have existed for over a thousand years, conditions may have arisen to make state medicine necessary. Yet it may be stated, without bringing specific arguments, that state control of the private practice of medicine would be an undesirable thing in a pioneer and democratic country. It would be a bureaucratic system not suited to a group that has been a mainstay in American life, nor suited for imposition on people with the spirit of Americans. The rank and file of both doctors and patients would not fit into it. It would be paralyzing to the initiative that makes men enter medicine. It would discourage young men of high ideals from entering. Without doubt it would develop unfortunate political aspects. We may be assured that state medicine will come only when the spirit dwindles out which enabled our fathers to cope with conditions in a new country without sacrificing their beliefs and their traditions.

The only immutable thing in human institutions is change. We may be sure that medicine will change and if changes do not come because of us they will come in spite of us. We must be like the Athenians described in the New Testament, men ever on the alert to see and hear some new thing. The scientific progress of medicine has been sufficient to satisfy the most exacting Greek. It is in the application of medicine to every-day life where we have allowed others to get ahead of us. We must evaluate new developments and solve new difficulties in the spirit of the time-tried traditions of medicine or as an independent group we will perish.

It needs no argument to convince one of the desirability of medical ethics and of the maintenance of the traditions of the profession. What we want to know is how to maintain them. Herein lies the crux of our present trouble. There is only one thing that will undermine our faith in spite of our belief and that is economic disaster. Physicians are being graduated today in the United States far in excess of the need for them. A recent estimate is that their numbers are increasing over the deaths at the rate of about eight hundred a year. On the other hand the field of work is being so narrowed that incomes are being lessened. A point may be reached when acute suffering on the part of physicians may arise. A spirit of cynicism may develop regarding the moralities of medicine. After a man has spent years of time and much money in training it is not likely that he will be content to settle down to an impossible economic situation just to maintain traditions. He will either seek a new occupation or he will listen to the siren song of commercialized medicine.

It is the economic status of physicians which will in the end determine whether we are to have such things as contract practice and state medicine. Perhaps the remedy lies, as has been suggested by Doctor B. T. Beasley, in a reduction in the number of men graduating until the number of pay patients per

doctor reaches a figure commensurate with his economic maintenance. Or perhaps it will have to be recognized that physicians should receive some pay from the community for the immense amount of free service they render. Our economic future lies in our own hands. If we fail, "the fault, dear Brutus, is not in our stars but in ourselves." Whatever is the remedy for our ills it is certain that it lies mainly in our own determination to maintain medicine as the high calling it always has been in this country.

GENERAL NEWS AND ANNOUNCEMENTS

Annual dues for 1933 will be \$8.75.

The Department of Society Activity in this issue contains important reports and comments.

Dr. William A. Hyland, Grand Rapids, is making a good recovery from severe injuries received in an automobile accident.

Dr. William J. Burns, Executive Secretary of the Wayne County Medical Society, addressed the Oakland County Medical Society on November 17 on the subject of "Medical Economics."

President-elect LeFevre, Chairman Corbus, J. D. Bruce, Grover C. Penberthy, C. E. Boys and F. C. Warnshuis were present at the funeral services of Dr. Ray C. Stone in Battle Creek as representatives of the State Society.

Mr. Alexander W. Blain of Detroit, father of Dr. Alexander W. Blain, president-elect of the Wayne County Medical Society, died at his home at the advanced age of ninety-two years. Mr. Blain was a veteran of the civil war.

On page 812 of this issue of the Journal will be found a summary of the recommendations of the Committee on the Cost of Medical Care, the final report and also recommendations of the minority group. It is the editor's intention to analyze this report in the January number of the Journal. We hereby extend an invitation to the members of the Michigan State Medical Society to comment on these recommendations.

The Washtenaw County Medical Society has decided for the coming year to hold meetings under what they call the host plan. County members of the Society have signified their willingness to entertain the County Society to dinner at the monthly meetings, twelve members defraying the expense of the monthly dinner as hosts to the Society each month. The meeting is to be held on the second Tuesday of the month. The speaker for the November meeting was Dr. Norman Miller, who spoke on the subject of "Birth Control."

The Michigan X-ray Society is now an established fact. The first meeting was held at Lansing about the first of November, when plans for organization were discussed. It was decided to hold three meetings a year. The membership consists of all X-rays specialists, including radio-theraputists, in the State. The movement has been made to establish a list of associate members which will be composed of doctors who do a large amount of X-ray work but who

do not limit themselves to radiology. It was decided to hold the next meeting, namely the mid-winter meeting, at Flint, Michigan.

The annual meeting of secretaries of state medical societies and editors of state medical journals which takes place in November in Chicago, was of more than usual interest this year when the usual number of secretaries and editors were present, but in addition a number of presidents of state medical societies and other officials also attended. Michigan was represented by Drs. J. M. Robb, President of the Michigan State Medical Society; George LeFevre, President-Elect; B. R. Corbus, Chairman of the Council; F. C. Warnshuis, Secretary, and J. H. Dempster, Editor of the Michigan State Medical Journal. The program was in the nature of a symposium on the factors that are making inroads into the practice of medicine. A number of very excellent papers were presented by men outside of the editors and secretaries. These papers will be published and therefore available to the members of the Michigan State Medical Society in succeeding numbers of the Bulletin of the American Medical Association. However, the editor of the Michigan State Medical Journal has endeavored to summarize the addresses and discussions. This article will appear in the January, 1933, number of this Journal.

DEATHS

DR. RAY C. STONE

The community was shocked on October 31, 1932, to hear of the sudden death of Dr. Ray C. Stone of Battle Creek. Dr. Stone had been out hunting in the country, where his lifeless body was found near his automobile. Dr. Stone had practised in Battle Creek for twenty-seven years following his graduation from the Detroit College of Medicine. He had always taken an active interest in medical affairs and as a consequence had been made President of the Calhoun County Medical Society and as is well known he was President of the Michigan State Medical Society in 1930-1931. Dr. Stone had served as captain during the world war, where he was in charge of a division of neuro-surgery in France. Dr. Stone was fifty-two years old. He was born at Ionia, Michigan. He is survived by his widow and one son, McRitt, aged seventeen years.

RESOLUTIONS

WHEREAS, Dr. Ray Clinton Stone was an honored member of the medical profession of the State of Michigan, and received the highest honors to be conferred by his confreres in this state; and

WHEREAS, he has maintained a close association with members of the medical profession in this and other cities of Michigan, and these physicians keenly feel his loss; and

WHEREAS, he was an outstanding citizen and the personification of honor, holding the respect of men for his leadership and their affection for his integrity;

THEREFORE, BE IT RESOLVED, that the Wayne County Medical Society pause in its deliberations to honor the memory of an illustrious physician, a sincere friend, a loving husband and father, a successful leader and an honorable citizen; and

BE IT FURTHER RESOLVED, that the Wayne County Medical Society express its sincere sympathy to the bereaved members of the Stone family. It sadly

realizes that no words from it, formal or informal, can assuage their grief or make them feel less keenly the greatness of their loss.

Adopted by the Wayne County Medical Society, Detroit, Michigan, November 1, 1932.

H. WELLINGTON YATES, M.D.,
President.

H. A. LUCE, M.D.,
Chairman Board of Trustees.

Attest: E. C. BAUMGARTEN, M.D., *Secretary.*

DR. JAMES W. LOSEE

Dr. James W. Losee of Pontiac died at his home on October 24, 1932, after an illness of three weeks. He was born in Springfield Township November 19, 1865. After a preliminary education in the district schools and the high school of Fenton and Pontiac he entered the homeopathic medical department of the University of Michigan, from which he was graduated in 1891. Dr. Losee was a member of the Oakland County and Michigan State Medical Societies as well as the American Institute of Homeopathy and the American Medical Association. He was active in the civic affairs of Pontiac, being at one time a member of the Pontiac Board of Commerce. He was also health officer of Pontiac for five years. He is survived by his wife; his mother, Mrs. Martin J. Losee; and two brothers, Floyd H. of Pontiac and Maynard A. of Wixom; and a sister, Miss Sarah L. Losee of Pontiac.

DR. ALBERT L. BRANNOCK

Dr. A. L. Brannock of Pontiac died at his home on October 13, 1932. He was born in Flint on June 15, 1872. He attended the Groveland Township Schools in Oakland County, the Michigan State Normal College at Ypsilanti and the Detroit College of Medicine, from which he received his medical degree. He also took post-graduate work at Harvard and Columbia Universities. Dr. Brannock located at Pontiac twenty-five years ago and was in private practice until he took over the duties of Director of Health Education in the schools of Pontiac in 1919. Dr. Brannock was a member of the Oakland County Medical Society, and the Michigan State Medical Society. He is survived by his widow, Mrs. Flora Crosby Brannock; one son, Jack, who resides at home; one sister, Mrs. Helen Coventry of Ortonville, and Chanecy M. Brannock of Maryville, Mich.

DR. H. A. VENNAMA

Dr. H. A. Vennama of Menominee, Michigan, died very suddenly at his home on October 20, 1932, of angina pectoris. Dr. Vennama was born at Holland, Michigan, sixty-eight years ago, where he attended the public schools and Hope College. He served as a drug clerk in Milwaukee, after which he came to Menominee. Following experience as a druggist he graduated from Northwestern College in Chicago with the degree of M. D. in 1887, and had practised in Menominee up to the time of his death. He is survived by one daughter, Miss Virginia Vennama, and two brothers.

DR. GEORGE W. RIDENOUR

Dr. George W. Ridenour of Detroit died suddenly at his home at the age of forty-three years. He had been in failing health for a number of months but he was able to continue his practice up to the time of his death. He was born at Massillon, Ohio, February 13, 1888, the son of Dr. Albertus W. Ridenour. Following attendance at the preparatory school in Ohio Dr. Ridenour entered the Uni-

versity of Michigan Medical School in 1908, but completed his work at the Detroit College of Medicine and Surgery in 1913. Dr. Ridenour was Staff Physician of the Detroit News, also the Pere Marquette and Wabash Railways and Chief Surgeon for the Continental Casualty Company. He was a member of the Palestine Lodge F.A.M., etc., also the Detroit Consistory and Moslem Shrine. He is survived by his wife, Mrs. Helen Ridenour, and two sons. Dr. Ridenour was a well known and popular member of the Wayne County Medical and Michigan State Medical Societies.

DR. CLARENCE E. TRUESDELL

Dr. Clarence E. Truesdell of Detroit died at his home on November 23, 1932, after an illness of slightly more than a week. Dr. Truesdell was born in Wayne County in the year 1893. He graduated from the Detroit College of Medicine in 1917 and has practised in Detroit ever since. He served as intern in Providence Hospital in 1918. Dr. Truesdell was a man of sterling character, quiet and unassuming. He will be greatly missed by all whose good fortune it was to know him. He leaves his wife, Arlene, and three children, Phyllis, Robert and Joan.

COMMUNICATIONS

AN ACCEPTANCE

Dear Doctor Warnshuis:

I have before me your request to serve on the committee on the Study of Birth Control.

This is a subject the physician naturally surveys with considerable trepidation, and certainly medical societies should give the matter serious thought before committing themselves to any expression of policy.

Because of the great popular demand for control knowledge, the medical profession must decide whether it shall or shall not become a party to the movement, and because of this necessity I accept your invitation to assist in the study of the problem.

Very sincerely yours,

R. S. MORRISH.

CHOICE OF PHYSICIAN

State of Michigan

DEPARTMENT OF LABOR AND INDUSTRY
Lansing

Lansing, Michigan.

November 9, 1932.

F. C. Warnshuis, M.D., Secretary
Michigan State Medical Society
1514 G. R. National Bank Building,
Grand Rapids, Michigan.

My dear Doctor:

I have your letter of November 4 in relation to medical services in connection with Workmen's compensation cases.

I am sending to you under separate cover two copies of the Workmen's Compensation law and direct your attention to Section 4 of Part 11 thereof. You will note that this section provides that the employer shall furnish or cause to be furnished reasonable medical, surgical and hospital services, and there is no provision by which the employer can be required to furnish such services when procured by the disabled employee himself. This latter question is, of course, covered by the rule of the Department and the decisions of the Supreme Court.

In many cases the employer or the insurer pays for such services when procured by the disabled em-

ployee, but these are usually emergency cases or cases where the employer or the insurer has not selected a physician. There are other cases when the Commission has determined that the services furnished are not reasonable within the meaning of the Act, and payment of services procured by the employee have been ordered for payment.

The principle upon which this section is founded is that the employer or the insurer has the right to select the physician, and when the service is promptly and properly rendered any additional service must be paid for by the employee himself.

Yours very truly,

JOHN L. BOER, *Secretary.*

To the Editor of the Journal of the Michigan State Medical Society:

The Radio Committee of the Michigan State Medical Society is desirous of extending its work throughout the state if possible and would like to include those districts which are at present not directly represented. It is highly desirable that every station be prevailed upon to permit messages from the medical profession to the public. At present Detroit, Grand Rapids, Jackson, Saginaw and one or two other places are represented. The committee invites correspondence from any of the constituent County Societies regarding the important matter of broadcasting. The Committee welcomes criticisms and suggestions.

Signed,

Radio Committee of the Michigan State Medical Society.

W. J. STAPLETON, JR., *Chairman*, Detroit, Mich.

H. H. ALTER, M.D., Detroit, Mich.

W. A. MANTHEI, M.D., Lake Linden, Mich.

NARCOTIC HABITUÉS

Those of us engaged in pharmacy feel that the indiscriminate use of the word "drug" where "narcotic" or "dope" should be used is a reflection on an honorable business and profession and tends to degrade it in the minds of many lay readers. As defined in the National Food and Drugs Act, a drug is an article used for the purpose of curing, mitigating, or preventing disease in man or other animal.

News writers and headline writers frequently refer to "drug" addicts, "drug" fiends, and "drug" raids when they mean narcotic (or "dope") addicts, narcotic fiends, and narcotic raids.

There is no objection on the part of the pharmaceutical profession and the drug trade to the publication of the misdeeds or misadventures of "dope peddlers" or "dope addicts," but to describe them as "drug peddlers" or "drug addicts" does an injury, so we are asking all editors to help discontinue the practice of using the word "drug" where the word "dope" or "narcotic" should be employed. There are assurances from the editors of newspapers that the subject will have their attention.

The practice is widespread in medical and pharmaceutical literature. Nearly every one having to do with such publications has been guilty of this misuse of the word "drug," even those of us who are seeking a discontinuance of the abuse.

If the editors of the medical journals would use the word "narcotic" or "dope" instead of "drug" in news items of raids or convictions, and in the columns advertising treatment for narcotic addicts, it would be a material aid in correcting an objectionable practice. Your coöperation to this end is earnestly requested.

Very respectfully,

ELI LILLY AND COMPANY

JOHN S. WRIGHT, Director

Advertising Department.

SOCIETY ACTIVITY

HO! WHAT CHEER?

Christmas, 1932—New Year's, 1933—We hail them—Ho! What Cheer? What indeed? Plenty. The year is about past and we have lived through it. True, it was fraught with many trying hours, days and nights of worry, and we were forced to forego much and relinquish many comforts and pleasures. But we lived, and in a school of experience we learned. We are wiser, we hope, and our lessons fit us for the future. We were tested and, though wounded, we carried on. A bitter experience to all of us, but it is past—we are on an uproad and Christmas and New Year's are at hand.

Let us be of cheer and retrieve fullest possible measures of happiness. Shall we not draw the curtain over what is past and indulge in this season in all the cheer we can find so as to be fortified to enter the new year with happy anticipations and a determination to regain all the joys of service, fellowship and life? Yes, there is much we could crab about, losses to be mourned, conditions to be complained of. Certain shadows still envelop us; the road is not yet all sunshine and roses. Serious problems still confront us; conditions are changed. Of what good will it be to continue to distrust and disbelieve?

So, here is a hearty, wholesome wish for a Merry Christmas time. Embrace the Christmas spirit and be of cheer. Pass it on. Be inspired. Regain faith and determine to make the new year compensate for the past year in happiness, joy of living and working and being re-inspired to carry on with zest and zeal during 1933. A Merry Christmas and a Happy New Year to you all.

THE SOUL OF MEDICINE

Probably at no time during the present generation has the term *economics* been so frequently used as it is now. From an almost purely academic subject in the past it has become a painful reality. From its very nature probably in no other subject with which the human intellect has attempted to grapple are the elements of economics so widely though perhaps not so well known.

As with that other term, *politics*, a common word with the so-called man on the street, so the same individual claims a greater or less acquaintanceship with the term economics. The past three years and particularly the last year have made the subject very vital to us and one to which serious attention must be given if we are to emerge from the present chaos. The inordinate greed for gain has gone a long way towards the destruction of old-time moral standards whose aim was service. Industry, which at one time sought to serve, has since assumed the rôle of exploiter. The commercial banker has in many instances become an investment banker with ideals of profit rather than that of service. And the old-time standards of honesty and honor have given place to the warning, *carcat emptor*. In other words, let each look out for himself and the devil take the hindmost.

The statesman, the politician, the industrialist and the professional man are keenly alive to the errors of the present system and seek, perhaps vainly, to readjust, through the new distribution and revision of economic standards, the glaring defects of our present unhappy situation which has spelled disaster for so many. But may we not have to go back of all this economic determinism to find some of the causes for this dread disease, and for which so many cures are offered? May it not be that the Soul of Industry, the Soul of Banking, and even the Soul of Medicine are to a great extent responsible for the country's ills?

Plato, the Father of Greek Philosophy, was the first great thinker to endow Man with a Soul, and all outward expression of human activity, whether good or bad, was determined by the condition of this spiritual reality somewhere within the personality of mankind. Perhaps the most crying need for the world today is not panaceas and theories whereby new procedures may take place in all departments of human life, but a revaluation of the motives and purposes of the Soul.

When in Medicine the human attributes and personal interest between physician and patient are entirely lost, may it not be that the Soul of Medicine has gone with it? Hippocrates, whom Plato quotes, never dreamed the extent to which *Materia Medica* could progress in the two thousand years that were to follow him, and yet, in his "Oath"

which his descendants were to accept for generations, he stresses the essential qualification of the physician for all time, namely, the high plane of ethics upon which the science of Medicine can only be practiced successfully, and that standard being dependent entirely upon the Soul of the practicing physician.

Science and research will continue to provide new cures for the diseases that rack the human body; Surgery will advance from its present high level of technic and efficiency to heights undreamed of in the future; but depersonalization of the human relationship between physician and patient, which is now the trend in the practice of modern Medicine and Surgery, may counter-balance all the progress made since the days of the Greeks.

The Soul of Medicine is at its fullest realization when the physician, with intelligent and sympathetic understanding, treats the patient as a complete personality in which the spirit must be healed as thoroughly as the disease, and the patient in turn looks to the doctor as one in whom he finds the skill of an Hippocrates combined with the sacred and inviolate consideration for the soul that was embodied in St. Luke, the Beloved Physician.



*President Michigan State
Medical Society.*

SOLICITORS WANTED

There are a number of industries and business firms in several cities in Michigan who might use to advantage advertising space in your JOURNAL. They either make or sell products used by doctors and their families. The advertising pages of the JOURNAL afford a medium for presenting their business and service to doctors. It is more effective, "pulls better," than does letter approach.

You, Doctor, may know of some druggist, wholesaler, auto supply dealer, insurance man or finance firm who could well use the JOURNAL's advertising columns.

Do you want to pick up some extra funds? Will ten, twenty, fifty or a hundred dollars for a little time be an incentive? The

JOURNAL will pay 20 per cent commission on all sales of advertising space. Sell one page for a year and \$60 is yours. Sell three half pages for three months each and \$54 is yours. Sell a quarter page for a year and \$18 is yours. An opportunity exists in every community. You members in Detroit, Flint, Pontiac, Saginaw, Battle Creek, Kalamazoo, Lansing and Jackson have exceptional opportunities. Why not embrace these possibilities to secure cash funds in a dignified manner?

If interested, write to the State Secretary for space rates, selling data and contract blanks.

DISTRICT ACTIVITY

The Seventh Councilor District has held two meetings of the four counties, both well attended, one at Port Huron with an attendance of over one hundred; the second at Marlette in Sanilac County with fifty men present.

We are now making preparations for a third meeting, to be held at Brown City, December 5, when Dr. Webster, of Marlette, who is going hunting, promises a venison dinner.

Every member of the State Society is invited to be present at that time and is assured that Dr. John Campbell of Brown City will see to it that no one's time is wasted.

Port Huron, Mich.,
October 18, 1932.

State Secretary:

On Thursday evening, October 13, I attended the county meeting of the Lapeer Society, at Lapeer. There were twenty-four in attendance, with visitors from Genesee, Sanilac, and St. Clair Counties.

The paper of the evening, on "Hematuria," was ably given by Dr. Flynn of Flint. A good discussion followed.

On Monday, October 17, I attended the meeting of the Sanilac County Society, held at Greenings Inn, Port Sanilac. We had an attendance of thirty-one, representing Huron, Lapeer, Tuscola, Genesee, St. Clair and Sanilac Counties.

Papers were given by Dr. Lafon Jones and Dr. H. Randall of Flint—the first, on "Tuberculosis in Children," and the other on "Thrombo-embolic Conditions." Both were excellent talks and were followed by free discussion.

I was able at this meeting to establish a closer contact with Huron County members and I believe that in the near future I will be able to have them get together and hold a meeting which will be the first one for nine years.

However, some of the men in that county have been very active in a quiet way, and have maintained close contact with the legislators of that district. They have responded to our call at all times, but

owing to the fact that no meetings have been held they have not received due credit for what they have done.

At the Sanilac County meeting last night, the members of that society voted to affiliate with Huron County, if it was the desire of Huron County to do so. As each county has few doctors I believe this is a desirable move, and I would like the proper sanction for such action.

I will send each doctor in Huron County a personal letter with an invitation to attend a meeting. With each letter, I shall have return card for acceptance, and as soon as these are in will arrange the meeting with them. I will also furnish a program for them and take as many of our members with me, as I can get to go.

I have found that all the county meetings in my district are becoming more interesting and enjoyable because we are having members from each county attend at all the other units of the district. It has created a wonderful spirit of friendship and coöperation, and the men look forward to these gatherings with anticipation of good times.

We have a wonderful crowd of men and they are really doing much to help the cause of the State and National Societies.

All the counties of the Seventh District favor the increase in dues and the \$600 appropriation for Dr. Marshall's committee.

Yours very truly,
T. F. HEAVENRICH, Councilor.

Port Huron, Mich.,
October 24, 1932.

Dear Doctor:

This message to you I wish to have as concise and brief as possible. I don't wish to burden you with facts or figures, but I do wish to hammer home just one idea. That is, unless all of the medical profession act unitedly we are all going to suffer.

There has never been a time in the history of the practice of medicine when concerted action was more vital than now. Legislative matters affecting the Public Acts under which we work are coming up for change. It is up to us to decide what those changes should be. And in this matter we are against a well organized force of the Cults.

The old saying, "United we stand, divided we fall," was never more apparent to us than now.

As Councilor for the Seventh District of the State Medical Society it is up to me to organize the doctors of this section, and there is no better method of doing this than to see that all county societies are organized and functioning.

We are well organized in St. Clair, Lapeer and in Sanilac Counties. All of these units are doing excellent work and their meetings are very well attended. The individual men are for the most part taking a much greater interest in matters than they did as outsiders, and the result is gratifying to me and to them.

My purpose in sending you this letter is to ask if you will attend a gathering of the doctors of Huron County to discuss matters looking to the reorganization of your society. It does not matter whether you belong to the State Society or not. I am sure you will wish to join us when you become aware of existing conditions.

The time and place of meeting will be left to your old officers—Drs. Holdship and C. I. Herrington. All I ask of you is that you return your answer on the enclosed card at once so that I can proceed with the arrangements.

I will furnish a scientific program for you if you desire one. Express your desire as to that.

Please fill in the enclosed card at once—don't

leave it for next day. With anticipation of an early reply, I am,

Yours fraternally,
T. F. HEAVENRICH, Councilor.

The foregoing exemplifies activity that achieves. The Councilor and Drs. D. McColl, J. G. Battley and T. E. De Gurse are persistently contributing their efforts to create a district unity that will enhance organizational progress. It is an example that may well be emulated.

COUNTY OPPORTUNITIES

The following letters and outline presents an opportunity to every county society. It should be a stimulus to every county. If it can be done in Illinois it can be done in Michigan. It is movements like this that will conserve individual interests. When they are perceived and applied many problems of medical care will vanish.

ILLINOIS STATE MEDICAL SOCIETY

OFFICE OF THE SECRETARY

Monmouth, Illinois, November 5, 1932

Dr. F. C. Warnshuis
1508 Grand Rapids National Bank Bldg.
Grand Rapids, Michigan
Dear Doctor Warnshuis:

You may be interested in a recent action of the Illinois State Medical Society in recommending to all component County Societies that they supervise their own clinics, and also sending each of them the enclosed outline relative to the organization and operation of Physically Handicapped Children's Clinics throughout Illinois.

Several years ago, the Rotary Club in Illinois sent two or three clinicians to various communities in the State to conduct for them Crippled Children's Clinics, and three years ago the Illinois Elks Association took over the work from the Rotary Clubs. The Elks have, for the past two and one-half or three years, been sponsoring these clinics in various parts of the State, having a chief surgeon in Chicago, who has named clinicians to act as "Zone clinicians" in carrying on the work. As matters now stand, the physicians are doing the work, and the Elks claiming the credit for the successful operation of the clinics.

Our Society is old fashioned, and still believes that all Health Movements and Clinics, to be successful, should be supervised both as to arrangement and operation, by Medically trained people, and should be managed in each community by the County Medical Society. We have no intention at this time to interfere with the work the Elks are sponsoring, or antagonize them in any way, but we have a number of representative communities where the County Society is organizing their own clinic, along the lines suggested in this outline. We have several such clinics which have been running successfully, for as long as six years, so we know it can be done. At this time, we are receiving the co-operation of the Illinois Federation of Woman's Clubs, and we are always anxious to enlist the aid of other organizations, to work with us in a co-operative way, and they are a big help to us.

I will appreciate it if you will look over the enclosed at your own convenience and let me know

your own opinion of the idea, and tell me if you agree with us in the movement. Enclosed also, are two reprints having a direct bearing on the movement.

With kindest regards I am

Yours very sincerely,
H. M. CAMP.

ILLINOIS STATE MEDICAL SOCIETY PHYSICALLY HANDICAPPED CHILDREN'S CLINICS

Conducted under direct management of local county medical societies.

1. Primal Unit, The County Medical Society, or, if desired, a group of two or more adjoining or nearby County Societies.
2. Coöperative Organizations—State Department of Public Welfare, State Department of Public Health, State Department of Public Instruction, and any other State Departments or Agencies which may desire to coöperate, Parent-Teachers Associations, Dinner Clubs, Federation of Woman's Clubs, Local Nursing Units, and any other agencies or organizations desiring to aid in a coöperative way.

THE PLAN

1. A Staff of qualified clinicians is available to conduct the Physically Handicapped Children's Clinics. When desired by the local County Medical Society, a list of these clinicians will be sent to them by the Scientific Service Committee of the Illinois State Medical Society so that they may make their own selection.
2. The County Medical Society in arranging the clinics shall have the assistance of the Scientific Service Committee of the Illinois State Medical Society, or any special committee which may be selected for the purpose.
3. The clinics should be conducted regularly, according to the desires of the local Society or Societies, and if possible should be conducted at a hospital in the community where the clinic is to be held.
4. The actual arrangements for each clinic should be made by the local County Medical Society, or group of Societies.
5. A list of physically handicapped children in each county has been made available through a resolution passed by the Illinois Legislature ordering a survey in each county to get a complete list of all such cases. The survey has been completed, and the list for each county can be procured by the local County Medical Society desiring same, by applying to the Scientific Service Committee, a sub-committee of the Educational Committee, Illinois State Medical Society, 185 North Wabash Avenue, Chicago.

THE CLINIC

1. Each patient should be regularly admitted to the Clinic and given a number, which number is retained for that patient for subsequent clinics.
2. All pertinent data concerning the case should be submitted by the family physician, and should include a history of the disability itself, family history, economic conditions under which the patient lives, etc.
- It is most desirable to insist on all actual indigents bringing a statement of their economic condition from a supervisor of charities, township supervisor, or some other designated officer in addition to statements from the family physician.
3. Patients able to pay a moderate, or even small fee for services rendered at the Clinic should do so, getting away from unnecessary pauperization.
4. It is always desirable to have visiting, community welfare, or Public Health nurses present at the Clinic if same are available in the community.
5. The family physician of each patient should be urged to attend the Clinic, so that he will be better able to carry out the desired after-treatment.
6. Treatments prescribed or plaster of paris casts may be applied at the time of the Clinic by the family physician, or in his presence, so that the suggestions of the clinician may be carried out properly.
7. A complete record of each case with the suggestions for treatment made by the Clinician should be made during the Clinic, and later written up in detail, a copy being retained by the Society or at the Hospital as desired, and one copy for the family physician. A third copy can be made and given to a nurse, for follow-up visits if desired.
8. All patients referred to the Clinic should be assigned to a definite physician, if they have no regular family physician or any preference, in order that they may receive the proper after-care.
9. It is always advisable for nurses, or someone designated for the purpose, to follow up each case, calling at the home of the patients soon after the Clinic to see that they desire to carry out the orders of the Clinician. Similarly, all patients should be notified before the Clinic so that they may appear at the proper time.

FINANCING THE CLINIC

1. The Illinois State Medical Society assumes no financial or other responsibility for the management or condition of Clinics.
2. It is recommended that the necessary financing of Clinics be managed by the coöperative organizations, which

can be done in many ways, such as holding card parties, charity balls, rummage sales, home talent plays, etc., and possibly through such assistance as may be procured from civic or township organizations.

3. Arrangements should be made to pay promptly the traveling expenses of any visiting Clinician. The Clinician should be given some modest remuneration for his services—such expenses and such fees can come from the funds collected for the operation of the Clinic.

THE RECORDS

- The records of each case coming before the Clinic should be kept in cumulative form, in individual folders arranged for the purpose. They should include:
- a. Patient's name, age, address, number, and name of the parents.
 - b. History—past, present, family, etc., in detail.
 - c. Examination records with all findings, all subsequent records of progress, suggestions made for the care of the patient, and all other pertinent data should be added from time to time.
 - d. Special examinations, including X-ray films, should be made a part of this cumulative record.

PROGRESS REPORT OF THE COMMITTEE ON THE SURVEY OF MEDICAL SERVICES AND HEALTH AGENCIES

With certain exceptions public relations committees have been appointed by the local societies and have supplied the necessary information preliminary to the local studies. The county societies which have thus far failed to lend the necessary aid are as follows: Oceana, Tuscola, St. Joseph, Huron, Dickinson-Iron, Berrien, Alcona, Benzie, Lake, and the society combining Otsego, Montmorency, Crawford, Oscoda, Roscommon and Ogemaw. In certain cases no replies have been received from the secretaries of these societies and in one case the public relations committee appointed has been inactive. Since these societies include sixteen counties it means that we now have returns from sixty-seven of the eighty-three counties in Michigan.

In general the percentage of returns from physicians is fairly good. Following is a list of the counties showing those which have failed to cooperate and, for each county which has cooperated, the schedules returned and the percentages of the total number of schedules mailed to the physicians.

November 2, 1932					
PHYSICIAN'S SCHEDULES					
County	Prel. Sch. Not Rec'd	1st Sch. Mailed	2nd Sch. Mailed	Sch. Rec'd	Per Cent Rec'd
Alcona	X				
Alger—See Marquette					
Allegan—See Kalamazoo					
Alpena		12	9	6	50
Antrim		11	6	4	36
Arenac—See Bay					
Baraga—See Houghton					
Barry		16	10	8	50
Bay-Arenac-Iosco-Gladwin		68	48	29	43

Benzie	X				
Berrien	X				
Branch		19	10	8	42
Calhoun		70	44	42	60
Cass		21	13	11	52
Charlevoix		11			45
Cheboygan		10	6	6	60
Chippewa-Mackinac-Luce		19	16	9	47
Clare—See Gratiot					
Clinton		21	17	8	38
Crawford	X				
Delta		22	18	6	27
Dickinson-Iron	X				
Eaton		32	18	16	50
Emmett		13	6	6	46
Genesee		167	119	94	56
Gladwin—See Bay					
Gogebic		23	15	12	52
Grand Traverse-Leelanau		30		6	
Gratiot-Isabella-Clare		41	26	25	61
Hillsdale		23	19	11	52
Houghton-Keweenaw-Baraga		42	32	15	36
Huron	X				
Ingham		114	77	58	51
Ionia-Montcalm		50	32	29	58
Iosco—See Bay					
Iron—See Dickinson					
Isabella—See Gratiot					
Jackson		123	76	39	31
Kalamazoo-Allegan-Van Buren..		169	104	81	48
Kalkaska—See Wexford					
Kent—Not Included					
Keweenaw—See Houghton					
Lake	X				
Lapeer		27	20	13	49
Leelanau—See Grand Traverse					
Lenawee		45	25	24	53
Livingston		14	9	8	57
Luce—See Chippewa					
Mackinac—See Chippewa					
Macomb		36	26	15	41
Manistee		16	8	9	56
Marquette-Alger		34	27	11	32
Mason		16	13	9	56
Mecosta-Osceola		18	11	12	67
Menominee		12	4	9	75
Midland		10	7	4	40
Missaukee—See Wexford					
Monroe		34	26	20	59
Montcalm—See Ionia					
Montmorency	X				
Muskegon		66	44	35	53
Kewawgo		13	9	7	53
Oakland		149	103	76	51
Oceana	X				
Ogemaw	X				
Ontonagon		7	....	0	....
Osceola—See Mecosta					
Oscoda	X				
Otsego	X				
Ottawa		39	25	18	46
Presque Isle—Not Surveyed					
Roscommon	X				
Saginaw		89	66	34	38
Saint Clair		61	41	27	44
Sanilac		18	9	10	56
Schoolcraft		5	1	4	80
Shiawassee		31	17	16	48
St. Joseph	X				
Tuscola	X				
Van Buren—See Kalamazoo					
Washtenaw		119	....	41	34
Wayne		1376	....	393	29
Wexford-Missaukee-Kalkaska		24	15	14	58
Totals.....	15	3386	1233	1343	

AVERAGE RETURNS—40 PER CENT

The average of 40 per cent is low because of the failure of a more complete return from Wayne County. It is hoped that the second mailing of schedules to this area will bring the average of the total return to at least 50 per cent.

Following the original plan, lists of those physicians who have failed to return a schedule have been mailed to public relations committees of local societies. These committees are asked to designate the approximate incomes, within very broad limits, of each

physician who has failed to make a return. While these figures will not be included in our analysis they will serve the purpose of determining whether or not those who failed to coöperate are to be found largely in only one income group or spread evenly throughout all income groups.

While the failure of the physicians to make complete and early returns has somewhat retarded the study, the analysis of schedules is being made now. To date, 1,350 schedules have been received and it is estimated that the complete returns will include information from 1,600 practicing physicians in the state.

The study of population and income is now making good progress and should be completed before January 1. This study is regarded as fundamental to the committee's final conclusions and must form one of the major pillars upon which the recommendation will rest.

The study of public health agencies has reached the stage where practically all of the material has been collected and the major part of this material has been analyzed for presentation. At present the report on these activities is being prepared and will be presented to the sub-committee for its consideration approximately December 1. The recommendations from the subcommittee will be transmitted with the report to the state committee.

The sub-committee on hospitals is now revising the main hospital schedule and the collection of information will start about November 15. In addition, data are now being prepared concerning the governmental expenditures for hospitals in Michigan. These expenditures will include the hospitals for mental diseases, tuberculosis, and other communicable diseases.

As soon as the studies of physicians and hospitals are completed the remainder of the studies will be brought to a close rapidly, so that the committee may begin to draft its conclusions at an early date. According to the present plan the committee will start its regular sessions during the early part of December. The task of digesting the information will be a tremendous one and the value of the entire series of study will very largely depend upon the time permitted for this process.

W. H. MARSHALL,
Chairman.

AN EDITOR SEES AND THINKS RIGHT

It might be well to pass this editorial on to the editor of your local paper. Public opinion can be enlightened. The following is from the Farmington *Enterprise*:

LOADING IT ON THE DOCTORS

The Oakland County Board of Supervisors is to decide within a few days how poor relief will be dispensed, whether under the County system as at present, or under the Township system that formerly prevailed. Regardless of what decision is made, one factor of the present situation cannot continue. That is the policy of making no provision for medical attention for indigents who may become ill, and depending upon the local doctors to dispense relief to the sick at their own expense. This has been the situation for months, and it has resulted in the indigent sick getting inadequate attention and the doctors getting no compensation whatever.

The present Poor Commission's report made a short time ago shows some savings in administration of poor relief that are not to be gainsaid. The men in charge are businessmen familiar with large-scale operations, and they handle things efficiently. But as one able supervisor has pointed out, in their showing of various large amounts saved are some things that must be discounted, and one of them is in regard to medical care. It is neither fair, right, nor good sound judgment to throw this burden back onto the doctors in the various communities and expect them to carry the load, then pointing to the "saving" achieved.

There is no need to dwell on the services performed by the physician in his community. In the best of times and under the happiest of circumstances his is still the most arduous, the most exacting and most soul-trying of professions. He knows no genuine rest, unless he runs away from his patients for a short period each year, and few of them do. Most of us go to bed at night knowing at about what time we will get up and how many hours sleep we will get, but the doctor never does. At all times, in all kinds of weather, he is at our beck and call—little better than a modern slave. For his toil he gets this: that if the patient dies, Dr. So-and-so was his doctor, and if the patient lives, it was Nature that performed the cure. Most doctors themselves die before their time.

Further it is also probable that no profession has been harder hit financially than the doctors. It is proverbial that "after the cure the doctor is forgotten," that even in good times the doctor is the last man paid. Now, in bad times, it is even worse. And two things are to be remarked. First, it is precisely in those sections of the County where the industrial populations live, that the physicians are having the hardest time, simply because so great a proportion of the population need every penny they can scrape up for food. The doctors have fewer paying patients, and the general health in these poorer sections is unquestionably at a lower mark than in the more prosperous areas, due to lowered resistance through undernourishment and neglect. A second fact to bear in mind is that in throwing this burden back on the doctors, a penalty is placed on humanity and kindness, since the more humane the physician the greater is the weight he will be called upon to carry. This rare doctor who may assume a "hard-boiled" attitude travels a happier, easier road than his colleagues whose instincts will not let them turn a deaf ear to suffering.

Medical care is an essential part of life, just as

are food and shelter. Indeed, the indigents who happen to fall ill are in the greatest need of all. Tossing the problems of these people back into the laps of our local doctors is not a "saving" in any sense—it is merely a start toward undermining the most important profession in the world.

INQUIRIES

The facilities of the Secretary's office are at the disposal of every member. Whenever assistance can be rendered or information imparted your requests will be promptly complied with.

In one day, this past month, the following inquiries were promptly replied to:

1. Rules governing fire insurance rates.
2. Rule as to whether an employee could designate his own medical attendant in a compensation case.
3. Address of a classmate.
4. To what extent may a doctor advertise?
5. Is ——— sanitarium ethical?
6. Where can I sent a narcotic addict.
7. How to secure a New York license.

It is a pleasure to be of service to members.

MICHIGAN STATE MEDICAL SOCIETY POSTGRADUATE CONFERENCE NINTH COUNCILOR DISTRICT

Thursday, November 10, 1932, at 1:15 P. M.
Northwood Hotel, Cadillac, Michigan

PROGRAM

Harlen MacMullen, M.D., Manistee, Councilor,
Presiding

- 1:15—Opening Statement—Councilor MacMullen
1:30 to 2:00—Management of Labor—H. S. Collisi, M.D., Chief of Obstetrical Service, Butterworth Hospital, Grand Rapids.
2:00 to 2:30—Pyelitis—W. J. Butler, M.D., Urologist, Blodgett Hospital, Grand Rapids.
2:30 to 3:00—Birth Injuries—T. D. Gordon, M.D., Pediatrician, Blodgett Hospital, Grand Rapids.
3:00 to 3:30—Contraceptive Principles—H. S. Collisi, M.D.
3:30 to 4:00—Intravenous Urography—W. J. Butler, M.D.
4:00 to 4:30—Infant Feeding—T. D. Gordon, M.D.
4:30 to 5:00—Treatment of Pneumonia—B. R. Corbus, M.D., Grand Rapids.
5:00 to 5:30—Head Injuries—F. C. Warnshuis, M.D., Grand Rapids.
5:45—Subscription Dinner and Social Hour.
7:00—Organizational Problems—B. R. Corbus, Chairman of the Council.
7:30—Organizational Activities—F. C. Warnshuis, State Secretary.

A very successful district conference was held at the Hotel Northwood at Cadillac the afternoon and evening of November 10.

We regretted Dr. Gordon's being unable to attend. The program was all very interesting with Dr. Collisi's talk on "Management of Labor," Dr. Butler's talk on "Pyelitis," Dr. Corbus' talk on "Treatment and Pneumonia," and particularly Dr. Warn-

shuis' talk on "Head Injuries" was especially instructive and presented a new angle in the care of not only head injuries but other injuries sustained in automobile accidents.

There were twenty-seven in attendance and a turkey dinner was served followed by interesting talks by Dr. Corbus and Dr. Warnshuis on Medical Society organizations and the part the individual and society should take in medical economics. Dr. Warnshuis complimented the Tri-County Medical Society on being one of the few societies in the state that had a hundred per cent membership of the doctors in its territory.

Counselor H. A. McMullen very ably presided and the members of the Tri-County Society felt the meeting was a decided success. It was regretted that due to illness our President, W. Joe Smith, was unable to attend.

J. F. CARROW, *Secretary.*

INSURANCE CLAIM BLANKS

The Chairman of the Civic and Industrial Relations Committee recently had a new experience in connection with filling out a claim blank for a patient.

The patient, who was the agent for a certain insurance company, came for the reduction of a fracture and in the course of his visits to the office presented a claim blank to be filled out for his insurance company. Your chairman made out and attached a statement to the blank for \$2.00, in accordance with the resolutions passed by our State Society. The agent (patient) stated that it was the policy of the insurance company not to pay fees for filling out blanks and offered the suggestion that an additional charge of \$2.00 be made on his bill for medical services, which, of course, the insurance company would be required to pay in accordance with the terms of the policy. He stated that filling out a claim blank by the physician for the patient was really part of the medical service rendered and therefore should be paid by the insurance company.

The suggestion is made to physicians that they adopt this method of collecting the \$2.00 fee as a temporary measure until the Bureau of Medical Economics of the American Medical Association makes its final report.

COUNTY SOCIETIES

BAY COUNTY

Wednesday evening, October 12, the Bay County Society resumed its meetings, after the summer recess. President Slattery presided, with thirty members present.

In addition to routine business, a number of important subjects were considered.

The Society has under consideration the establishment of a Central Physicians' Credit Bureau. The Society also decided to form at once a political unit to busy itself with local and state affairs, affecting the profession and the public health.

The Councillor, P. R. Urmston, gave an annual report of the activities of the Council.

The delegate to the state meeting reported in detail on the deliberations of the House of Delegates at Kalamazoo. He also reported on the unsuccessful attempt on the part of certain members of the State Society to replace the Councillors of this and the Ninth (Saginaw) districts.

After the business meeting, Dr. W. G. Gamble,

pathologist at Mercy Hospital, gave a very scholarly paper on "Glucose."

The Program Committee reported as speaker for the next meeting, Dr. A. E. Catherwood, Detroit.

L. FERNALD FOSTER, M.D., *Secretary*.

GRATIOT-ISABELLA-CLARE COUNTY

The October meeting of the Gratiot-Isabella-Clare County Medical Society was held in the Wright Hotel, Alma, Thursday evening, October 13, with thirteen members and nine visitors for dinner. Four members came in after dinner for the program.

In the absence of President Burt, Vice President Carney called the meeting to order. The minutes of the previous meeting were read and approved. Doctor Carney then made his report as delegate to the State Society meeting at Kalamazoo.

With appropriate remarks Doctor Carney then introduced Dr. Reed M. Nesbit from Ann Arbor, who talked on the new operation for the removal of prostatic obstruction. The doctor showed the instrument used in doing the operation and went into details as to how the operation is done. The advantages of the operation are the shorter preparation, less shock and the shorter convalescence and reduction in the mortality rate as compared to prostatectomy. The doctor has done this operation in 160 cases, in which there were twelve deaths. Some of these 160 patients would have been considered unsafe for a prostatectomy. Some were out of bed on the third day and on their way home on the fifth day. After the operation a catheter is left in the urethra for about three days, after which the patient can usually urinate freely with very little distress.

Doctor Nesbit very kindly answered many questions. On behalf of the Society, Doctor Carney thanked Doctor Nesbit for his excellent presentation of this subject.

Meeting adjourned.

E. M. HIGHFIELD, M.D., *Secretary*.

HURON COUNTY

A meeting of the Huron County Medical Society was held at Huron Inn, Ubyly, Nov. 10, at 6 P. M. This meeting was called after its need was urged upon every medical man in the county by personal letter from the District Councilor. In response to this call, twelve out of the nineteen doctors of the county attended. Five others signified their intent to be on hand, but were prevented for good reasons. Another was confined as a result of an auto injury.

This almost unanimous action is significant of the desire of the medical man to respond and do his part in whatever organized medicine calls on him to do. The interest and attention given to a talk by Dr. H. J. Robb, our state president, and the discussion following, was proof of this. Coming after Dr. Robb's talk and suggestions from many of the older men present, it was unanimously decided to endorse and work with the officers of the Michigan State Medical Society in all its endeavors for the good of legitimate medical practice.

At the dinner—one such as only Host Dr. Holdship could provide—there were over thirty served. The men present represented Huron, Sanilac, St. Clair, Lapeer and Tuscola Counties.

A resolution was offered that Huron County join with Sanilac County and form the Sanilac-Huron County Society. This was passed without a dissenting vote. And here comes the rub.

Dr. John Campbell, stalwart republican leader of Sanilac County, was pitted for the presidency of the combined society, against William Holdship, the arch democratic leader of Huron County. Dr. Hold-

ship, in his gracious manner, stated that as a good democrat he had all the joy he wished out of the elections of the eighth, and stated that he did not choose to run.

By motion, the officers of Sanilac County were asked to continue as officers of the present society. This was amended to make Dr. W. B. Holdship vice president.

Following the business meeting talks were given by Dr. T. Heavenrich, Head Injuries; Dr. D. J. McColl, Port Huron, Newer Remedies in Obstetric Practice; Dr. M. E. Vroman, Port Huron, Common Eye Conditions; Dr. J. C. Battley, Poliomyelitis, Diagnosis and Treatment.

This has been the first meeting of Huron County held in thirteen years. The members feel decidedly honored in that our state president, Dr. J. M. Robb, took the time and the trouble to attend and they wish to assure him that it is only for him to call on them for anything they may do in lightening his burden as chief executive of the state organization.

HURON-SANILAC

At the meeting of the Huron-Sanilac Medical Society on November 10, 1932, the following resolutions were drawn up:

WHEREAS: Dr. Sheldon B. Young has been called from our midst by the "Great Physician" and accepted his last Assignment and

WHEREAS: His passing is deeply felt by his associates in the medical profession and also by the community at large.

His friendly greetings and sympathetic understanding of life's problems will be missed by every one.

BE IT RESOLVED: That the Huron-Sanilac Medical Society hereby tenders its profoundest sympathy to Mrs. Young and

BE IT RESOLVED: That a copy of this resolution be sent to the widow, published in the State Journal and also placed on file in this Society.

DAVID D. McNAUGHTON
C. B. MORDEN
F. L. MORRIS

Committee.

INGHAM COUNTY

The new officers of the Medical Society of Ingham County, elected at the September meeting, are as follows: President, Dr. William McNamara; vice president, Dr. R. Pinkham; treasurer, Dr. T. I. Bauer; secretary, Dr. R. L. Finch.

The October meeting of the Medical Society of Ingham County was held at the Hotel Downey, on the twenty-fifth. After a dinner, attended by eighty members, the meeting was called to order by the president, Dr. McNamara. Reports were submitted by Dr. Bauer of the Bulletin Committee, and Dr. Davenport of the Indigent Sick Committee. The applications of Drs. J. S. Rozan, E. J. Robson and L. E. Bleuwkes for associate membership were approved.

Dr. J. Milton Robb, president of the Michigan State Medical Society, was the main speaker of the evening. He gave a very interesting and instructive talk on the functions of a medical society. Mr. William J. Burns, secretary of the Wayne County Medical Society, also gave a short impromptu talk supporting the National Economy League.

One of the new features this year is the publication of a monthly bulletin which is distributed to each member of the society and includes the minutes of the previous meeting, interesting features of the hospital staff meetings, hospital news, etc. We believe the bulletin is a great asset.

RUSSELL L. FINCH, *Secretary*.

JACKSON COUNTY

A large attendance marked the October meeting of the Jackson County Medical Society which met Tuesday evening, October 18, at the Elks Temple. After dinner the Society congregated in the Memorial Room for the regular business and scientific part of the meeting.

The minutes of the preceding meeting were approved as printed in the Bulletin. Dr. Hungerford moved that the By-laws be amended to the effect that the office of vice president be eliminated and a president-elect be elected at each annual election. The motion was seconded by Dr. O'Meara and was carried.

Dr. Frank Van Schoick, chairman of the Health Education Committee, reported that the activities of that committee were to be continued much the same as before. The tuberculin testing which last year was carried out only in the high schools is to be extended this year to include all the schools. Each year it is planned to have the pupils of the first, fourth, seventh, tenth and twelfth grades tested. In this way each pupil will receive a test each third year.

Dr. Clark stated that he would like to see the County meetings held on the third Monday evening of each month instead of the third Tuesday, eliminating the dinners. This, he stated, would give the members one more evening at home with their families, inasmuch as most of the members held Monday evening office hours and the meetings could be started at 8:30. He moved that the Board of Directors give this consideration. There was no second to this motion.

The meeting then was turned over to Dr. Earl Thayer, who introduced Dr. George E. Brown, chairman of Medical Education and Research at The Mayo Clinic, as the speaker of the evening. Dr. Brown gave a very instructive lecture on the subject, "Problems of Hypertension."

The meeting then adjourned.

R. H. ALTER, M.D., *Secretary*.

KALAMAZOO ACADEMY

The Academy was entertained at the Kalamazoo State Hospital on the afternoon of Tuesday, October 18, 1932. This was a clinical program and cases were presented to illustrate the topics discussed.

"Presentation of Cases of Syphilis of the Nervous System with Atypical Serology" was given by Dr. H. A. Sears. He presented four organic cases of syphilis with doubtful serology, and functional cases of insanity.

"Presentation of Unusual Neurological Cases" was given by Dr. McCarthy. He presented three cases of spastic paraplegia, a Parkinsonian syndrome of lethargic encephalitis, and a psychoneurosis hysteria.

Dr. Sears presented a case of multiple sclerosis.

Dr. Clark presented an unusual case of insanity with acute appendicitis where on operation a ten-penny nail was found in the appendix. Numerous other nails were found scattered through the intestinal tract.

Dr. John M. Dorsey, Assistant Director, State Psychopathic Hospital at Ann Arbor, presented two cases that vividly represented a manic depressive psychosis and schizophrenic psychosis or dementia præcox. He gave a static interpretation of these two forms of psychosis and differentiated them in regard to: first, what they started with in the matter of the integrity of their physical and mental make-up; second, what happened to them during life as regards physical and mental accidents, etc., third, what was in store for them?

At 6:30 P. M. a harvest dinner was served in the

Amusement Hall at the State Hospital. Music was rendered by an orchestra composed of employees of the hospital.

The business meeting of the Academy was then called to order by the President, Dr. Morter. The minutes of the previous meeting as published in the bulletin were approved.

Drs. Gregg and Don Rockwell moved the acceptance of the recommendations of the executive committee made at their meeting October 15, 1932. Motion carried.

Dr. Wm. Scholten of the Kalamazoo State Hospital was unanimously elected to membership.

Dr. Pratt read the resolutions on the death of Dr. A. H. Gifford. Drs. Hubbell and Wilbur moved the acceptance of the resolutions and that they be spread on the minutes of the meeting and a copy be sent to the family. Motion carried.

RESOLUTION BY THE KALAMAZOO ACADEMY OF MEDICINE ON THE DEATH OF DR. ARLON H. GIFFORD

Dr. Arlon H. Gifford was born in Augusta in 1870. He was educated in a local school and in Michigan State Normal College at Ypsilanti, and in the year 1900 he entered the Detroit College of Medicine, from which he was graduated in 1904.

He practiced in Alamo, Kalamazoo County, for several years and feeling that he desired more medical training he entered Grace Hospital, Detroit, and took one year of intensive intern work, after which he located in Kalamazoo.

Dr. Gifford was a family physician of the finest type and had been a physician, friend, and counselor of a large number of families continuously since he began his career of twenty-eight years. He was devoted to his work and gave to each of his patients the best care and advice that his long experience and training enabled him to give.

Resolved, that in the death of Dr. Gifford the Kalamazoo Academy of Medicine recognizes the loss of a brother practitioner of more than usual promise, and who was honored by all who knew him, esteemed by his fellow citizens, loved by his patients and friends, and was always ready to serve.

We, the members of the Kalamazoo Academy of Medicine, feel his loss very keenly.

Dr. Morter announced to all the death of Dr. W. E. Upjohn this day at his home at Brook Lodge and expressed a desire for the Academy to be present at his funeral in a body.

MECOSTA COUNTY

The regular meeting of the Mecosta County Medical Society was held at Osbornedale in Big Rapids, Michigan, Tuesday evening, October 11, 1932. The Dental Profession of Mecosta County were hosts.

Members present were Drs. Treynor, Franklin, MacIntyre, Yeo, Bruggema, Bunce, Campbell and Burkart; dentists: Drs. Pryor, Zetterstedt, Shank, Shepherd, Miller and Rogers. Dr. Ward Moore of Grand Rapids, president of the State Dental Society; Dr. James Spencer of Grand Rapids, member of the State Board of Dental Examiners; Dr. Eamons of Grand Rapids, the Hon. W. F. Jackson, Big Rapids; Lawrence O'Neill, and Dr. Claude Root and son of Greenville were guests of the Society.

The meeting was called to order by President MacIntyre at 7:45 P. M. Reading of minutes of the last meeting was dispensed with. The President introduced the new counselor for the Eleventh District, Dr. Thomas P. Treynor of Big Rapids, who gave a brief outline of the activities in prospect and commended close union of the two professions.

The meeting was turned over to Dr. Rogers, chair-

man of the evening's program, who introduced Dr. Ward Moore, president of the State Dental Society. Dr. Moore gave a very interesting and not generally known account of the methods employed by irregular dentists, who, by "catchy" phrases in advertising, entice people to consult them, with disastrous results. Dr. Moore enlarged upon the necessity of adequate legislation to protect the people against the nefarious practices of the "advertisers," and cited methods used to secure registration.

Dr. James Spencer, Grand Rapids, gave a very clear exposition of the work of the State Board of Dental Examiners, and urged all dentists and medical men to unite in petition to the Legislature of the State to enact vigorous laws to protect the public against the dangerous practices of the "advertising horde." Dr. Eamons of Grand Rapids also gave some very pertinent remarks on actual practices of the class of dentists in question, and urged the aspirants for legislative honors present to keep in mind the disclosures of the previous speakers.

Dr. Shepherd of Remus advised the Society that one of the "travelling frauds" had visited Remus. There being no further business, on motion a rising vote of thanks was given our hosts and guests.

On motion it was decided to hold the next meeting Thursday, November 10, because of election on November 8.

JNO. L. BURKART, *Secretary-treasurer.*

MONROE COUNTY

November 12, 1932.

Monroe County Medical Society held its annual meeting at the Park Hotel, Monroe, October 20, 1932.

The following officers were elected:

President, Dr. C. J. Golinvaux, Monroe; vice-president, Dr. J. H. McMillin, Dundee; secretary-treasurer, Dr. Florence Ames, Monroe; censor, Dr. W. W. Bond, Monroe; directors, Dr. P. D. Amadon, Monroe, and Dr. M. A. Hunter, Monroe; delegate, Dr. P. D. Amadon; alternate, Dr. D. C. Denman, Monroe.

The November meeting was held on the tenth, one week early so as not to conflict with the deer-hunting season. At this meeting, President Golinvaux outlined the program for the coming year. Dr. Henry F. Vaughn, Commissioner of Health, Detroit, spoke on "The Place of the County Medical Society in the Public Health Program." He described in detail the methods used in Detroit, where the anti-diphtheria campaign has been carried out in the offices of the private physicians, with good results as to immunization, minimum expense to the city, and doctors paid for their work. Every county society in Michigan ought to hear this talk. Dr. Philip D. Amadon, Monroe, gave his report as delegate to the state meeting in Kalamazoo.

Two new members were welcomed into the society: Dr. S. L. Miller, 18 S. Monroe St., Monroe, and Dr. R. W. McGeoch, Mercy Hospital, Monroe.

FLORENCE AMES, M.D., *Secretary.*

NORTHERN MICHIGAN

The regular monthly meeting of the Northern Michigan Medical Society was held at the Perry Hotel, Petoskey, on Thursday, November 10, with an attendance of eighteen members and two guests.

The meeting was called to order by President Stringham. The Secretary's report was read and approved. Various committees were heard from. The business was then laid aside and the program for the evening taken up.

Dr. Morrel M. Jones of Pontiac gave a most interesting paper on "Podalic Version—Potter Tech-

nic." To most of the men present podalic version and its accomplishment was a rare procedure and seldom done. But after listening to Dr. Jones and viewing his movies of the operation many felt that they really had learned that the many things they had heard of Potter's technic were wrong. The paper and movies proved to be one of the best programs we had ever had. Those who missed it were really out something.

The meeting was then closed after Dr. Parks of Petoskey was appointed to the program committee. Annual election of officers will be held at the next meeting in December.

E. J. BRENNER, *Secretary.*

SAINT CLAIR COUNTY

A regular meeting of Saint Clair County Medical Society was held at Edgewater Inn, Port Huron, Michigan, Tuesday, October 18, 1932. Supper was served to seventeen members and guests at seven o'clock, after which the Society was addressed by Dr. W. J. Cassidy of Detroit upon the general subject of cancer.

Doctor Cassidy presented the whole question in a pleasing and scientific manner and yet made his address perfectly understandable to his hearers. Beginning with the various theories which have been advanced in recent years with regard to the cause of malignancy, Doctor Cassidy took his audience through the entire subject down to treatment and then as a climax presented a dozen pathological specimens with a brief case history of each.

The most important points stressed by the Doctor were, that we are as much at sea as ever in regard to the cellular changes which make normal tissue become malignant, that the histo-pathologist is behind the surgeon in the matter of research, that not all types of malignancy may be treated with any degree of success and that in many cases lack of any treatment is better for the patient, that the slow growing types of tumor without metastatic growth offer the best prognosis for radical surgery, that the size of the primary growth bears no relation to its degree of malignancy, that reports from pathologists are often in error, that the surgeon must use his own judgment in the presence of negative reports, that the treatment of malignancy with radiation is largely experimental and often results fatally if the dosage be too great, that radium has its field of usefulness and must never be used in presence of a secondary infection, that malignant growths occurring before fifty are much more fatal than those of after life and that cases treated surgically must be carefully selected in order to avoid bringing the profession into disrepute by the occurrence of bad results.

The discussion was opened by Dr. J. A. Attridge. Doctors Heavenrich, Smith, Fraser and Bowden also took part in the discussion, after which Doctor Cassidy replied to questions and comments arising therein. A rising vote of thanks was given the speaker before adjournment.

GEORGE M. KESL, *Secretary-treasurer.*

SHIAWASSEE COUNTY

The September meeting of the Shiawassee County Medical Society was addressed by Dr. Neil Bently, of Detroit, on the subject of "Acute Affections of the Middle Ear."

The address was received with great interest by the members present, and many questions asked by those present.

The October meeting was well attended and had for speaker Prof. I. F. Huddleson, of the M.S.C., whose subject was "Undulant Fever." This disease,

which is widely spread among wild and domestic animals, has long been known, but only in comparative recently years been studied to any great extent, and Prof. Huddleson is one of the investigators who have done original work.

Dr. I. W. Greene, delegate from this society, made a very good report of the Kalamazoo meeting.

W. E. WARD, *Secretary-Treasurer*.

TRI-COUNTY SOCIETY

The annual election of Tri-County Medical Society resulted as follows: President, Dr. W. Joe Smith, Cadillac; first vice president, Dr. Hubert Doudna, Lake City; second vice president, Dr. W. A. Crawford, Manton; secretary and treasurer, Dr. J. F. Carrow, Cadillac.

The following committees were appointed: Finance Committee—Dr. S. C. Moore, Cadillac; Legal Committee—Dr. J. F. Carrow, Cadillac; Program Committee—Dr. J. F. Carrow, Cadillac; Dr. W. A. Crawford, Manton, Dr. Hubert Doudna, Lake City, and Dr. Steven Fairbanks, Luther.

The delegate to the state Society, Dr. W. Joe Smith, Cadillac; alternate, Dr. J. F. Gruber, Cadillac.

J. F. CARROW, *Secretary*.

WASHTENAW COUNTY

At the last meeting of the Washtenaw County Medical Society on November 3, 1932, it was decided that, for the ensuing year, meetings would be held under the host plan. The hosts are to be chosen by the Secretary from the returned cards who indicated their willingness to cooperate in giving the plan a trial. The meetings from now on will be held the second Tuesday of the month unless this meets with disapproval. This will be discussed at the next meeting. You will be notified, as usual, as to the time, place and program. We are asking for your cooperation and will they who have not returned their cards please do so. There will be twelve hosts for each meeting and the approximate cost per individual for the year will be between seven and eight dollars, or less.

The speaker for the next meeting will be Dr. Norman F. Miller, whose topic will be Birth Control.

Hosts for the next meeting will be:

Dr. Fred Arner, Dr. H. Barss, Dr. A. R. Barr, Dr. P. Barker, Dr. Jeanette Barnes, Dr. H. Britton, Dr. M. Bell, Dr. Ellen Brown, Dr. Charles Brown, Dr. Fred Collier, Dr. H. H. Cummings, and Dr. D. M. Cowie.

A. C. KERLIKOWSKIE, M.D.
Secretary-Treasurer.

WAYNE COUNTY

Dr. Walter B. Cannon, George Higginson, professor of physiology, Harvard University Medical School, Boston, will present the 1933 Beaumont Lectures of the Wayne County Medical Society, January 30 and 31. The subject tentatively selected is "The Relation of the Autonomic System to the Functions of the Alimentary Canal."

All members of the Michigan State Medical Society are cordially invited by the Wayne County Medical Society to visit Detroit and hear these lec-

tures, which will be presented in the Society's auditorium, Maccabees Bldg., Woodward at Putnam, Detroit.

Officers of the Wayne County Medical Society for the 1932-33 year are: Dr. H. Wellington Yates, president; Dr. A. W. Bain, president-elect; Dr. E. C. Baumgarten, secretary; and Dr. Frank A. Kelly, treasurer. These physicians were installed at the Society's General Meeting of October 4, 1932.

The program of the Wayne County Medical Society for the Tuesday evening meetings during December includes:

December 6, Joint Meeting with Harper Hospital of Detroit. Clinical Pathological Conference conducted by Dr. Plinn F. Morse.

December 13, Joint Meeting with the Detroit Bar Association.

All members of the Michigan State Medical Society are always cordially welcomed at these interesting meetings. You will be made to feel at home on the occasion of your visit to the auditorium or to the club rooms (4421 Woodward at Canfield, Detroit) of the Wayne County Medical Society.

The thirty-three committees and boards of the Wayne County Medical Society got under way to an early start. The majority of these groups, which handle the multitudinous detail of the Society, held their organization meetings in July and a number have met weekly and bi-weekly since that time. All committee meetings are held in the club rooms of the Wayne County Medical Society, over the luncheon table. The restaurant of the Society does a rushing business between the hours of 11:30 A. M. and 2:30 P. M. every week day.

Two radio talks are presented each week by the Wayne County Medical Society, one over Station WWJ on Tuesdays, 5:45 to 6:00 P. M., and the other over Station WEXL on Tuesdays at 10:30 to 10:45 A. M.

The recently organized Speakers' Bureau of the Wayne County Medical Society offers to furnish other county medical societies with excellent talent for their programs. If you desire a speaker, write or call the Speakers' Bureau at 4421 Woodward Ave., Detroit, Columbia 1638. A month's notice will be appreciated, in order to give the selected physician or surgeon plenty of time to prepare a good paper.

The Noon Day Study Club, composed of members of the Wayne County Medical Society who are under the age of forty, is back to its old schedule of Tuesday and Friday luncheon meetings. The members present and discuss the latest advances in medicine to their confrères. The Medical Section meets on Tuesday, and the Surgical Section meeting is on Friday.

Many Detroit physicians have associated themselves with and have become very active in the good work of the National Economy League, which is a voluntary nonpartisan organization formed to direct public opinion toward government economy. Its first specific objective is the elimination of the legalized abuse whereby at least four hundred and fifty million dollars per annum is now being expended by the National Government for benefits to veterans who suffered no disability in or through war service. The medical profession in general should become very interested and active in the work of the National Economy League.

The Woman's Auxiliary presented a mahogany Steinway grand piano to the Wayne County Medical Society on November 8, 1932. The beautiful instrument has been placed in the lounge of the club rooms.

WOMAN'S AUXILIARY, MICHIGAN STATE MEDICAL SOCIETY

MRS. F. A. MERCER, President, Pontiac, Mich.
MRS. E. L. WHITNEY, Vice President, Detroit, Mich.
MRS. HERBERT HEITSCH, Secretary, Pontiac, Mich.

William J. Burns, Executive Secretary of the Wayne County Medical Society, gave a most inspiring talk to the Women's Auxiliary of the Oakland County Medical Society at their October meeting. Luncheon was served in the City Hospital with an attendance of thirty-five members. The Auxiliary has planned to organize a large auxiliary group to work for the needs of the City Hospital.

It is with regret that we note the passing of Mrs. Walter Jackson Freeman, president of the Woman's Auxiliary to the American Medical Association. Mrs. Freeman died in Philadelphia, October 27, 1932, following an illness of three weeks.

The daughter of a physician, the wife of a physician, the mother of two physicians, the life and interests of Mrs. Freeman were peculiarly closely allied to the medical profession. Her father was the late Dr. William W. Keen of Philadelphia.

(MRS. R. H.) HELEN C. BAKER.

The Woman's Auxiliary to the Wayne County Medical Society held their initial fall meeting on September 20, 1932. The following officers were installed for the year 1932-1933: President, Mrs. Claire Straith; first vice president, Mrs. Frank W. Hartman; second vice president, Mrs. James H. Dempster; recording secretary, Mrs. A. O. Brown; corresponding secretary, Mrs. Leo Orecklin; treasurer, Mrs. S. P. L'Esperance; custodian, Mrs. Warren L. Hulse; financial secretary, Mrs. Wm. Rieman.

Mrs. Straith has appointed the following chairmen to assist her: Program, Mrs. Frank W. Hartman; Social, Mrs. Edward G. Minor; Ways and Means, Mrs. Perry Burnstine; Revision, Mrs. James H. Dempster; Hygeia, Mrs. H. R. Leibinger; Public Relations, Mrs. R. E. Loucks; Legislative, Mrs. Chas. J. Barone; Membership, Mrs. Basil Connelly; Publicity, Mrs. Leslie T. Henderson; Welfare, Mrs. Chester Paul; Courtesy, Mrs. Alex Cruikshank.

The meeting was well attended and the program interesting. Dr. H. Wellington Yates, president of the Wayne County Medical Society, gave an address on "How an Auxiliary Can Be of Assistance to the Medical Society." Mrs. Elsie Wulkop of Boston, Massachusetts, talked on "Sociological Aspects of Birth Control." Miss Wulkop was a social service worker in the Massachusetts General Hospital for ten years. Mrs. Emory Parnell gave dramatic readings. Tea and social hour followed.

The October meeting, held in the club rooms of the Society on the eleventh, was devoted to a public health program and was conducted under the auspices of the Public Relations Committee, Mrs. R. E. Loucks, chairman; the Program Committee, Mrs. Frank W. Hartman, chairman, and the Hygeia Committee, Mrs. H. R. Leibinger, Chairman. Invitations were sent to all club presidents in Detroit. Parent-teacher and church groups were also invited to attend. The entire program was arranged to interest the laity. About 150 attended.

Dr. William Herbert Emerson, director of the Pasteur Institute of the University of Michigan, talked on "Some Aspects of Public Health." Dr. H. Wellington Yates gave an enlightening talk on "Hygeia." Mrs. J. Milton Robb discussed "The Activities of the Visiting Nurses Association," illustrated with moving pictures.

The exhibits were from the Board of Health edu-

cational department with Miss Connelly in charge, Hygeia, and American Medical Association.

Elizabeth Hamilton Duggan, soprano, gave a number of selections, in costume, accompanied by Mrs. Morris D. Silver.

Tea and a social hour followed, with Mrs. Edward G. Minor, social chairman, and her committee as hostesses.

MRS. LESLIE T. HENDERSON,
Publicity Chairman.

JOURNAL ADVERTISERS

It cannot be stated too often that continuance of your JOURNAL is dependent upon advertising income. If results are not obtained advertisements are discontinued. Every member is requested and urged to give preference patronage to our advertisers. Read the advertising section of each issue. Write to these advertisers for samples or literature. Welcome the salesmen of firms who advertise in your JOURNAL and favor them with your business. You can do much to increase advertising revenue.

LEGAL DEFENSE

Legal defense is a valuable feature of membership. One suit or threat of suit may cost you anywhere from \$200.00 to \$1,000.00 in attorney fees—an amount equal to your county and state dues for twenty years or even a lifetime. Recently a member lapsed in his dues. Suit against him was started. His attorney fees were \$475.00—sufficient to pay his dues for twenty years. Against another doctor, who had been a member for but six years and whose total dues paid were \$90.00, a suit was started and \$1,180.00 was paid from the defense fund to attorneys who appeared in his behalf. Granted that he lives and practices forty years, he will still have saved \$500.00 and all the while protected as well as participating in the other membership benefits. Society membership is a valuable asset.

When threatened or sued, immediately notify your local society medico-legal representative and Dr. W. J. Stapleton, Chairman, Medico-Legal Committee, David Whitney Building, Detroit. Do not engage an attorney. Do not discuss the case. Remain silent till you receive instructions from Dr. Stapleton. If you are in good membership standing your legal interests will be protected.

AN ECONOMIC INDEX

An old farmer was asked when he thought hard times would be over.

"Well," he said, "I've lived through a good many such days as these and I've noticed that they most always just about last out three pairs of pants. I'm on my third now and the seat is so thin, if I sit on a penny I can tell whether it's heads or tails, so I think we're pretty near out of the woods."

Maybe that's as good an economic index as any. When enough trousers are worn through more will be bought and business will be helped. Part of the troubles may be due to the fact that in '27, '28, and '29 too many men bought too many trousers they didn't have to wear out. In '30 and '31 and so far in '32 they've been wearing 'em out. And may we add that when we all resume sane buying all along the line, medical bills will again be paid.

YOUR COUNTY SOCIETY

Your County Society is what you as a member make it. Many profitable opportunities confront you if you will determine to embrace them. Attend every meeting. Participate in every discussion. Work on Committees. Become a Booster. You will have a wonderful Society if you do.

THE DOCTORS' LIBRARY

THE SURGICAL CLINICS OF NORTH AMERICA. (Issued serially, one number every other month.) Volume 12, No. 5. (Chicago Number—October, 1932.) Octavo of 268 pages with 61 illustrations. Per clinic year, February, 1932, to December, 1932: Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1932.

A NEW DEAL. By Stuart Chase, 254 pages. The Macmillan Company, New York, 1932.

The author is a well known economist who has to his credit several trenchant books, *The Tragedy of Waste*, *Men and Machines* and *The Nemesis of American Business*. *The New Deal* is a very timely book, presenting as it does an analysis of various factors that are responsible for the present economic debacle. The problem of production has long been solved. As every one is painfully aware, the great problem of today is that of distribution, the getting of necessary goods to the would-be consumer. After a detailed analysis of the economic system of production the author pays his respects to the nineteenth century doctrine of *laissez faire*. He pleads for government interference, or, as he expresses it, control from the top. *The New Deal* is a thought-provoking book that should be read by every one. Our readers will profit by the well marshaled argument in favor of scientifically controlled industry and centralized management of the economic system.

CYTOLOGY AND CELLULAR PATHOLOGY OF THE NERVOUS SYSTEM. Edited by Wilder Penfield, Professor of Neurology and Neurosurgery, McGill University, Montreal. Contributors: Erik Agduhr, Leslie Arey, Percival Bailey, Max Bielschowsky, J. Boeke, William Boyd, Paul Bucy, F. de Castro, Stanley Cobb, William Cone, Edmund Cowdry, Pio del Rio-Hortega, Arthur Elvidge, Jonas Friedenwald, Joseph Globus, Godwin Greenfield, Roy Grinker, Ariens Kappers, James Kernohan, John MacMillan, Pierre Masson, Jean Nageotte, Wilder Penfield, Philipp Stöhr, F. H. Verhoeff, Lewis Weed. 886 illustrations, 15 in color. 3 volumes, 1,267 pages. Paul B. Hoeber, Inc., New York, 1932. \$30.00.

In these volumes we have a remarkable compendium of information on the microscopic structure of the nervous system. This work, as the most complete and up-to-date of its kind in the English language, will compel the attention of those interested in the nervous system whether they be neurologists, neurosurgeons, anatomists or pathologists. The scope, dealing with both the normal and the pathological phases of the tissues of the peripheral, sympathetic and central nervous systems and of the meninges, pineal gland, hypophysis and retina, is as extensive as neurological practise. The list of contributors is essentially a catalogue of most of the best known students of nerve tissue in the world. In addition to well known American and Canadian writers the contributors consist of such men as Ariens Kappers of the Brain Institute of Amsterdam, Boeke of Utrecht, the Germans, Philip Stöhr and Max Bielschowsky, and del Rio-Hortega and de Castro, students of Cajal.

It must be understood that this work is not merely another work in neurology. It is not concerned with the tracing of nerve pathways nor with clinical manifestations of disease. It deals directly with those things which are basic to neurology—the normal structure of the various cells and tissues of the nervous system and its alteration in disease. Experimental studies are frequently quoted and the functionally minded attitude of the authors is everywhere apparent.

The chapters of the first two volumes deal pri-

marily with the general character of the neurone, with the physiological conditions of nerve development, with the spinal and sympathetic ganglia, with nerve sheaths, with sensory and motor endings, with nerve degeneration and regeneration, with neuroglia, choroid plexuses, meninges, cerebrospinal blood vessels, the retina and optic nerve, pineal gland and hypophysis. In each section, the normal and the pathological conditions are treated. The last volume, deals with malformations, neoplasms and inflammatory reactions of the nervous system.

"Cytology and cellular pathology of the nervous system" can be recommended unhesitatingly to those interested in the nervous system. It will be a sourcebook to the student and a guide to the specialist. The text is well edited and is readable. The illustrations are clear, consistently good, and beautifully executed. A complete index and sectional bibliographies containing about 2,500 references increase the value of the work to the general reader and the specialist respectively. The format and the imitation leather binding are the same as in the "Special cytology" by the same publisher.

NURSES ON HORSEBACK. By Ernest Poole. Octavo of 168 pages, illustrated. New York, The Macmillan Company, 1932. Cloth, \$1.50.

This is a story of the work of the Frontier Nurses among the mountaineers of Kentucky, told in a very vivid and interesting style. The author has gathered the material for his story from personal observations while making rounds with the nurses on their daily and nightly visits on the sick.

He tells of the prejudices and superstitions of these people, built up through generations, and of the difficulties encountered by the Nurses in bringing medical and nursing help to them. Only the splendid spirit of these women during the six years of its existence has made this service possible.

The book should be of interest to anyone working for the betterment of humanity and especially to workers in the fields of health and social welfare.

STENOGRAPHIC REPORTS OF THE CLINICS OF JOHN F. ERDMANN, M.D., F.A.C.S., Professor of Surgery in Columbia University; Executive Officer in the Department of Surgery, New York Post-graduate Medical School; Director of the Department of Surgery, New York Post-graduate Hospital. Edited by J. William Hinton, M.D., F.A.C.S., Associate Professor of Surgery, New York Post-graduate Medical School (Columbia University); Associate Visiting Surgeon to Bellevue Hospital, New York City. 315 pages with 39 illustrations. Philadelphia and London: W. B. Saunders Company, 1932. Cloth, \$4.50 net.

This monograph consists of stenographic reports of Dr. Erdmann's lectures to students. It is based upon a surgical experience extending over forty years. Among the subjects treated are the pre-operative and post-operative care of patients. The subject of Appendicitis is fully discussed, also Gall-bladder Disease and Digestive Disorders and Abdominal Pain and Acute Pancreatitis. Considerable attention is given to malignancy as it involves different portions of the alimentary tract. Surgery as it pertains to the Genito-Urinary Tract is also interestingly discussed. There are a number of other subjects which go to make the book interesting and profitable to the surgeon, who would be well repaid in spending an evening or two perusing it.

MEDICAL PAPERS OF THE NOON-TIDE CLUB. Wayne County Medical Society. Volume II, 1931-1932.

The Wayne County Medical Society Noon-Day Study Club is an organization of the younger members of the Society for the study of scientific phases of medicine. The scope of the work is very broad, including as it does the whole domain of medicine and surgery and the specialties. Probably there is no activity in the history of the Society that has

meant more towards the intellectual advancement of the profession. Volume II contains forty-six papers very legibly mimeographed, two columns to the page. The work represents a vast amount of observation and study on the part of the forty-six authors. It would be difficult to select any of the articles for special review inasmuch as the papers selected would probably be those dealing with some phase of the reviewer's own work. We will conclude, then, by saying that they are all of a high order and that the editing has been thoroughly done. We understand there are a few extra copies for sale which may be procured through the publication committee, which consists of Drs. Mark McQuiggan, Martin Hoffman, Jack Agins, Catherine Corbeille and Royce Shaffer of the Wayne County Medical Society, and here's hoping that the depression will not interfere with a publication of a third volume of this work.

THE COLON, RECTUM AND ANUS. By Fred W. Rankin, B.A., M.A., M.D., F.A.C.S., Division of Surgery, The Mayo Clinic; Associate Professor of Surgery, The Mayo Foundation; J. Arnold Bargen, B.S., M.D., M.S. in Medicine, F.A.C.P., Division of Medicine, The Mayo Clinic; Assistant Professor of Medicine, The Mayo Foundation; and Louis A. Bue, B.A., M.D., F.A.C.S., Section on Proctology, The Mayo Clinic; Associate Professor of Proctology, The Mayo Foundation. 846 pages with 435 illustrations. Philadelphia and London: W. B. Saunders Company, 1932. Cloth, \$9.50 net.

This work will be welcomed by men of the profession, both surgeons and internists. Rankin's work is well known as well as the contributions of his associate authors. There has been much progress in knowledge of lesions of the colon both as to increasing efficiency in diagnosis as well as treatment. According to Dr. Rankin, "roentgenoscopic examination of the large bowel whereby visualization is assisted by palpatory manipulation now permits accurate localization and recognition of the pathologic type of more than 95 per cent of the lesions of the large bowel." The order of the work includes anatomy and physiology, followed by a chapter on embryology which, however, is not necessarily the stereotyped anatomy and physiology of the textbooks. The chapter on anatomy and physiology, according to the author, is largely derived from original work done in the Mayo Clinic by Dr. J. A. Steward, who has made special studies of the vascular supply of the large bowel, rectum and anus. The thirty-eight chapters which comprise this volume include almost every condition that is likely to affect the parts of the anatomy under consideration. Particularly commendable features are the illustrations, which are numerous and purposive. They consist of line drawings, photographs, radiographs, with a frontispiece of the colon and its mesocolon showing the blood supply, all in colors. Each chapter is furnished with a bibliography which indicates the scope of the literature reviewed on the subject. This is one of the most complete and comprehensive works that has appeared on this subject in recent years.

DIAGNOSIS AND TREATMENT OF DISEASES OF THE THYROID GLAND. By George Crile and Associates. 508 pages with 164 illustrations. Philadelphia and London: W. B. Saunders Company, 1932. Cloth, \$6.50 net.

The senior author of this work states that it is not a formal treatise on the thyroid gland but rather an account of the experiences of the staff of the Cleveland Clinic in the treatment of diseases of the thyroid gland. It is meant particularly as an interpretation of clinical experiences in the diagnosis and treatment of simple goiter, of hyperthyroidism and of malignant tumors of the gland. The volume contains a review of the literature regarding the rôle of iodine. The book is of composite authorship; fourteen of the thirty-nine chapters, however, are

by the senior author. Though not intended as a complete work on the thyroid gland, it goes without saying the 500 pages which comprise the work are full of interesting information on the subject, as everyone would expect from a work issued by the Cleveland Clinic. The illustrations are such as actually do illustrate. This cannot be said of many medical works in which borrowed illustrations are found. The pictures in this work of Dr. Crile and his associates all show evidence of originality and purpose. We have on the whole a very readable volume.

OF GENERAL MEDICAL AND SURGICAL INTEREST

X-RAYS, ELECTRONS AND LIFE (New York Times)

When Dr. H. J. Muller in the course of his classic experiments turned the X-rays on the fruit-fly and obtained monstrosities that startled experimental evolutionists, and when still more recently X-rayed grapefruits were exhibited in Schenectady, N. Y., which had flowered in five weeks instead of the usual five years, we beheld what was in effect a transmutation of life comparable with the transmutation of the elements. Life itself had been made to yield.

The roots of life are the genes—infinitesimal units of highly complex compounds. Although they are alive, they are nevertheless aggregations of atoms. When atoms are struck by X-rays—bullets of light, according to the new view—electrons are expelled from the nuclei. The atoms are changed and so is the element that they compose. We saw not so many weeks ago that when the gamma rays of radium, which are much like X-rays, strike the nucleus of a beryllium atom, helium is knocked out. Matter was transmuted in the truest sense. Have we not what a biologist would call a mutant? And is it not clear that X-rays must affect the atoms of genes by disturbing their electrons in some way not yet determined?

Here we have the starting point of a purely physical and chemical theory of the action of energy on the living cell with which biologists are already concerned. Atomic physics and experimental evolution seem to join hands. The problem of modifying the gene is therefore much like that of transmuting the atom by the application of force.

SACRAL BLOCK ANESTHESIA IN PERINEAL PROSTATECTOMY: ITS INFALLIBILITY WHEN ACCURATELY ADMINISTERED

Edwin Davis, Omaha, states that the more or less general impression that sacral block anesthesia (in prostatectomy) is not wholly reliable and dependable, and that there is a certain small but inevitable percentage of failure, is erroneous. This mistaken idea may be explained in part by a confusion between the simple caudal injection and the complete sacral block, and, in part, by inaccuracy in technic, without recourse to theories with respect to anatomic and physiologic variation. Sacral block anesthesia, accurately administered and with the needles unquestionably in the foramina, is uniformly and invariably dependable for perineal prostatectomy. This statement is based on the fact that it has been possible to run an as yet uninterrupted series of 229 consecutive cases of perineal prostatectomy, without the necessity for additional anesthesia in a single

instance, and without drug narcosis other than one-fourth grain of morphine. The sacral block method is applicable in all cases of prostatectomy. It has not been necessary to exclude a single case on account of fear or nervousness or mental excitability on the part of the patient. Sacral block anesthesia carries with it no hazard which is inherent in the anesthesia itself, provided the most elementary form of caution (aspiration before injection) be employed, in avoiding puncture of the dural sac or blood vessels. The average time necessary for injecting the caudal canal and the three sacral foramina on each side (seven in all) is twelve and a half minutes. The method of anesthesia which may be made invariably dependable, which has no inherent anesthesia hazard and no complications or sequelæ, which is simple in its technical application and is not time consuming should be the method of choice. In the author's experience, sacral block anesthesia has been a material factor in maintaining a mortality rate as low as 2.38 per cent (nine deaths) in a consecutive series including 378 cases of perineal prostatectomy. He therefore considers this form of anesthesia as the ideal method for perineal prostatectomy.—*Journal A. M. A.*

THE GREAT COURSE OF MEDICAL ENDEAVOR: PRESIDENT'S ADDRESS

In the President's address before the American Medical Association at the Eighty-Third Annual Session, New Orleans, May 10, 1932, E. H. Cary, Dallas, Texas, said in part: "Contributing perhaps more than any other factor to the furtherance of this scientific cultivation of medicine is the great channel that the American Medical Association affords the different branches of medical knowledge, which collaborate therein, obtaining thereby the best opportunity for the highest development of our art. This great organization, imbued with this larger conception, centered its attention on education and on what could be accomplished through concerted educational zeal, as one of its chief claims for coöperative effort. So it came to pass that the great motif, from 1847 until now, has been the advancement of the science of medicine through educational achievements, so that both the theory and practice of medicine could be harmonized, through an ever growing art and science, for the good of humanity. When we speak of the achievements of the American Medical Association, we start with the educational program outlined by our forefathers, recognizing their wisdom and foresight and the fruits of their planting as they were ripened in the most orderly fashion by the astute leaders who have directed and guided the affairs of this great power and body. Strangely true, most of this monumental work can be seen by these men who have survived and are here to see and enjoy the accomplishments of their planning. One of these men approaches the honorable age of the octogenarian, another has already achieved this remarkable goal—both are still contributing their unstinted interest and inspiration to the American Medical Association. While personal allusion is unnecessary, any student of our history will recognize these outstanding characters. No child of this parent body should ever grow so lusty, ambitious or proud as to disturb the confidence in, or function of, this great organization in building reliance in the policies of the profession as a whole. Voluminous data have been furnished me by the heads of the different departments which comprise the American Medical Association, making complete its service. I regret that time prevents me from presenting more of this information. No one man could comprehend the vast endeavors carried on

by our organization without devoting time to a daily survey of the work being accomplished. I commend this ever increasing program of service to your attention, hoping that more of our members will visit headquarters and become acquainted with its high purposes and extensive and effective routine. It bridges the chasm between professional accomplishments and public needs."—*Journal A. M. A.*

SPINAL ANESTHESIA

F. G. LINDEMULDER, Ann Arbor, Mich., describes the clinical changes that occur during and following spinal anesthesia and some of the sequelæ and complications. He also reports two cases in which death occurred several days following the anesthesia. It appeared that the anesthesia was a contributing cause for the deaths. The permanent effects of the drug were seen at necropsy. In one case, the spinal cord was noted to be normal in the cervical region, and in the lower dorsal and lumbar regions definite pathologic changes were noted. It has been said by several observers that there is no irritation in the nervous system following the injection of procaine or its allied drugs and they compare this finding with irritation produced by the inhalation method on the mucous membranes of the bronchi and lungs. However, the author feels that there is a definite toxic effect on the spinal cord and the spinal nerve roots, which shows its effect both clinically and pathologically, the patient usually complaining of pain, and this finding can be explained by the pathologic study of the nerve roots.—*Journal A. M. A.*

VITAMIN D

RUTH COWAN CLOUSE, Chicago, prefaces her review of the literature on Vitamin D with a brief discussion of its discovery. She calls attention to the fact that the discovery of this fourth vitamin has been of the greatest importance to the medical profession as well as to mankind, because it has brought about the solution of the century-old problem of the cause and prevention of rickets. Today, because of this discovery, severe rickets, in civilized countries at least, is coming to be a rare disease. The opinion has even been expressed that within the next decade, or even sooner, the disease in all its forms may be almost completely eradicated; that it will become as rare as has infantile scurvy since the widespread use of orange juice. To the English physiologist Mellanby belongs the credit of the discovery of the specific antirachitic factor or vitamin. His reports, published in 1918 and 1919, contain the first accounts of the undoubted production of true rickets in an experimental animal—in this case the dog—and of its cure by dietary means. On diets consisting chiefly of cereal and small quantities of whole or skim milk, diets which are now recognized as deficient in Vitamin D and also in calcium, there developed in Mellanby's puppies soft bones, bowed legs and other typical deformities seen in rachitic children. More definite proof of the presence of true rickets was obtained from roentgenograms and from chemical analysis of the dogs' bones, which were found to have a decidedly low calcium content. When a few cubic centimeters of cod liver oil was added to the diet, rickets failed to appear. Comparatively large amounts of butter fat and suet prevented it to some degree, but lard, cottonseed, olive and linseed oils proved entirely ineffective. Here was proof positive that the cause of rickets was to be found in a definite deficiency in the diet and that the cure lay in the addition of certain specific foods to the ration.—*Journal A. M. A.*

INDEX TO VOLUME XXXI

AUTHOR'S INDEX

	PAGE		PAGE
Adair, Fred L.....	23, 363	Kiely, Charles.....	272
Alderman, Martha A., B.S.....	314	King, Don.....	637
Andrews, F. T.....	269	Klingmann, Theophil.....	694
Arnold, A. L.....	399	Krieg, Earl George.....	456
Aromstam, N. E.....	326	Kronfeld, Peter C.....	319
Ashley, L. Byron.....	539	Larkum, N. W.....	395
Baker, Frederick A.....	702	Larson, Bertil T.....	702
Barnes, Donald J.....	397	Larson, Walter E.....	267
Battley, J. C. S.....	814	Lashmet, F. H.....	114
Baumgarten, E. C.....	257	Levin, Samuel J.....	116
Beel, Horace J.....	67	Lewis, Howard Bishop.....	249, 307
Belote, George H.....	368	Lindemulder, F. G.....	275
Berent, Morris S.....	443	Lockwood, Bruce.....	225
Blashill, James B.....	711	Manwaring, J. G. R.....	224, 348, 427, 494
Boys, C. E.....	453	Martmer, Edgar E.....	383, 801
Brachman, D. S.....	683	Meyers, Royal A.....	39
Brosius, William L.....	703	Miller, M. P.....	582
Burnell, Max.....	324	Millett, H. S.....	694
Cameron, J. A.....	143	Moehlig, R. C.....	525, 656
Campbell, Mary.....	482	Moll, Carl F.....	617
Capener, Norman.....	191	Myers, J. Arthur.....	632
Carmichael, Edward K.....	33	McGregor, Robert.....	404
Carmichael, G. A.....	449	McIntyre, Charles H.....	410
Chadwick, Henry D.....	109	McKean, R. M.....	394
Clinton, William R.....	539	McLean, Don W.....	314
Coan, Glenn L.....	401	MacGregor, W. W.....	386
Coller, Frederick A.....	87	Nesbitt, Reed M.....	176
Collisi, Harrison Smith.....	178	O'Leary, Paul A.....	567
Corbus, B. R.....	10	Ormond, John K.....	18
Cowen, Robert L.....	469	Parkhurst, Howard J.....	796
Currier, Fred P.....	437	Pierson, Merle.....	482
Cummings, H. H.....	794	Plaggemeyer, H. W.....	254
Danforth, J. C.....	535	Polozker, I. L.....	34
Davis, David B.....	437	Poos, Edgar E.....	477
Desjardins, Arthur U.....	777	Pyle, Wynand.....	648
Dickey, Lawrence D.....	334	Rankin, Fred W.....	1
DuBois, Charles F.....	462	Ransom, Henry K.....	87, 332
Durman, Donald C.....	645	Rector, Frank L.....	305
Dutchess, C. E.....	98	Reveno, William S.....	443
Evans, William A.....	621	Rieckhoff, George G.....	120
Farbman, Aaron A.....	535	Robb, J. M.....	173
Faul, Henry J.....	204	Roehm, Harold R.....	531
Fisher, Ralph L.....	711	Russell, C. V.....	804
Ford, Eleanor J., R.N.....	314	Ruthven, Alexander G.....	301
Gates, Nathaniel.....	121	Ryerson, Frank L.....	330
Gordon, J. Whitlock.....	533	Schaefer, Robert L.....	703
Hackett, Walter L.....	182	Schiller, Arthur E.....	705
Hamil, Brenton M.....	373	Sewell, George.....	199
Hart, Vernon L.....	184	Sharp, E. A.....	394
Haskell, Robert H.....	93	Sherman, George A.....	574
Henderson, Harold.....	471	Sidall, R. S.....	564
Heringhaus, Francis J.....	126	Simpson, Walter M.....	639
Hughes, Ray W.....	538	Smith, Richard R.....	787
Huizinga, J. G.....	268	Snapp, Carl F.....	561
Jackson, George H., Jr.....	28	Sowers, C. N.....	479
Judd, E. Starr.....	243	Stapleton, W. J., Jr.....	277
Kamperman, George.....	577	Starmann, Bernard H.....	267
Kelly, Frank A.....	790	Straith, Claire L.....	13
Kempton, Rockwell M.....	188	Teed, R. Wallace.....	537
Kennedy, Robert.....	197	Throckmorton, Tom Bentley.....	75

Veldman, Harold E.....	379
Vonderheide, E. C.....	394
Waldbott, George L.....	698
Warnshuis, F. C.....	259, 379
Watkins, Charles H.....	570
Weltman, Carl G.....	254
West, Olin.....	763
Whalen, Charles J.....	71
Whitacre, Frank E.....	23
Wilkinson, A. P.....	327

CONTRIBUTED ARTICLES

- Actinomycosis of the Liver. George G. Rieckhoff, M.D., 120.
- Actinomycosis, Primary in Ovary. C. E. Boys, M.D., 453.
- Allergic Diseases in Children. Samuel J. Levin, M.D., 116.
- Allonal Poisoning, A Case of. N. W. Larkum, M.D., 395.
- Annual Meeting, 112th, Michigan State Medical Society, Kalamazoo, 509.
Official Program, 519.
Proceedings, 724.
- Appendicitis. W. W. MacGregor, M.D., 386.
- Appendicitis Under Two Years. Rockwell M. Kempton, M.D., 188.
- Ascaris Lumbricoides Infestation in Children in Oakland County. Harold R. Roehm, M.D., 531.
- Asphyxia Neonatorum. Harold Henderson, M.D., 471.
- Behavior Problems in Children. Brenton M. Hamil, M.D., 373.
- Bilateral Optic Neuritis and Electric Rhinitis. Ray W. Hughes, M.D., 538.
- Birth Control Movement, The. George A. Kamperman, M.D., 577.
- Bone Grafting: Some Fundamental Principles. Vernon L. Hart, M.D., 184.
- Brain Abscess and Lateral Sinus Thrombosis as a Complication in Mastoiditis. A. P. Wilkinson, M.D., 327.
- Cancer Committee, Supplementary Report of. C. E. Dutchess, M.D., 98.
- Cancer Control in Michigan. Frank L. Rector, M.D., 305.
- Carcinoma of the Liver, A Case of Primary in an Infant. Merle Pierson, M.D., and Mary Campbell, M.D., 482.
- Carcinoma of the Stomach: Observations on Surgical Treatment. Henry K. Ransom, M.D., and Frederick A. Collier, M.D., 87.
- Carpal Bones, A Dislocation of the—The Scaphoid and Semilunar: Report of a Case. F. T. Andrews, M.D., 269.
- Cesarean Section, Indications for. R. S. Sidall, M.D., 564.
- Chronic Polypoid Maxillary and Ethmoid Sinusitis with Asthma. M. P. Miller, M.D., 582.
- Chyle Cyst of the Mesentery, Report of a Case of. A. L. Arnold, Jr., M.D., 399.
- Circulatory Disturbance in Certain Psychoses after the Fourth Decade of Life, The Significance of. Theophil Klingmann, M.D., and H. S. Millett, M.D., 694.
- Cirrhosis of the Liver, Syphilitic. Ralph L. Fisher, M.D., and James B. Blashill, M.D., 711.
- Clinics and Social Problems that Threaten Our Professional Entity. Charles J. Whalen, M.D., 71.
- Contraception. George L. LeFevre, M.D., 610.
- Contraception, Sociological Aspects of. Harrison Smith Collisi, M.D., 178.
- Diabetic, Service for the Ambulatory. Don W. McLean, M.D., Eleanor J. Ford, R.N., and Martha A. Alderman, B.S., 314.
- Doctor's Log, The. W. J. Stapleton, Jr., 277.
- Early Tuberculosis in the Strict Sense of the Word. Diagnosis of. J. Arthur Myers, M.D., 632.
- Edema, A New Method of Studying. F. H. Lashmet, M.D., 114.
- Encephalitis, Acute Epidemic. Fred P. Currier, M.D., and David B. Davis, M.D., 437.
- Endocrine Glands, The Embryohormonic Relations of the. Part I. R. C. Moechlig, M.D., 525.
Part II. R. C. Moechlig, M.D., 656.
- Endocrinology in Obstetrics. Robert L. Schaefer, M.D., and William L. Brosius, M.D., 703.
- Epidermophytosis of the Hands and Feet. Arthur E. Schiller, M.D., 705.
- Examination of the Back. Donald C. Durman, M.D., 645.
- Femoral Hernia, Abdominal Operations for. Glenn L. Coan, M.D., 401.
- Fetus, Intracranial Injuries of the. Fred L. Adair, M.D., 363.
- Filament-Nonfilament Count, The Routine Use of. William S. Reveno, M.D., and Morris S. Berent, M.D., 443.
- Fundus Oculi, Photographs of the. Frank L. Ryerson, M.D., 330.
- Gall-bladder Disease and Diabetes. C. D. Brooks, M.D., and William R. Clinton, M.D., 539.
- Gall-bladder Surgery in the Aged. Walter L. Hackett, M.D., 182.
- Hydronephrosis, The Conservative Operative Treatment of. John K. Ormond, M.D., 18.
- Hyperparathyroidism. Nathaniel Gates, M.D., 121.
- Hypertrophy of the Breasts, Diffuse. Max Burnell, M.D., 324.
- Ileostomy, Primary, in the Treatment of Generalized Peritonitis. E. C. Baumgarten, M.D., 257.
- Immunization Against Diphtheria, Percutaneous Method of. Edgar D. Martmer, M.D., 801.
- Intestinal Obstruction. Harold E. Veldman, M.D., and Frederick C. Warnshuis, M.D., 379.
- Intraperitoneal Therapy. R. Wallace Teed, M.D., 537.
- Iridectomy, Preliminary, A Plea for the. J. G. Huizinga, M.D., 268.
- Kent County Medical Society. President's Address. Horace J. Beel, M.D., 67.
- Kidney Infections of the Adolescent Female. Robert L. Cowen, M.D., 469.
- Labor, Report of a Series of Cases of Bougie and Bag Inductions of. G. A. Carmichael, M.D., 449.
- Laryngeal Paralysis, Relationship of, to Medicine and Surgery. Edgar E. Poos, M.D., 477.
- Medicine in a Changing Age. J. C. S. Battley, M.D., 814.
- Mentally Handicapped Children in Michigan, The Needs of. Robert H. Haskell, M.D., 93.
- Myasthenia Gravis Following Electrical Shock. F. G. Lindemulder, M.D., 275.
- N-Propyl Disulphide in Polycythemia Vera, Beneficial Effect of. E. A. Sharp, M.D., E. C. Vonderheide, M.D., and R. M. McKean, M.D., 394.
- Obstetrics, Rural—Analysis of 500 Cases. Charles F. DuBois, M.D., 462.

Official Program. 112th Annual Meeting of the Michigan State Medical Society, September 13, 14, 15, and 16, 1932, 585.

Omphalocele Congenitalis. J. Whitlock Gordon, M.D., 533.

Organizational Activity, 60.

Otological Problems, Some Common. Carl F. Snapp, M.D., 561.

Pancreas, Traumatic Rupture of the. Report of a Case. Henry K. Ransom, M.D., 332.

Pernicious Anemia. George A. Sherman, M.D., 574.

Pernicious Anemia, Neurologic and Psychopathic Manifestations of. Charles Kiely, M.D., 272.

Physician, The Relation of the, to the Public. E. Starr Judd, M.D., 243.

Pigmentation and Keratosis Following the Use of Arsenic. N. E. Aronstam, M.D., 326.

Plastic Surgery: Its Psychological Aspects. Claire L. Straith, M.D., 13.

Post-Graduate Course, Why a? Tom Bentley Throckmorton, M.D., 75.

Practice of Medicine by Corporations, The. F. C. Warnshuis, M.D., 259.

Prevention of Tuberculosis, Recent Advances in Community. Observations on 35,000 Students. D. S. Brachman, M.D., 683.

Printed Documents, Some Early, of the Medical Department of the University of Michigan. George H. Jackson, Jr., 28.

Problems of Medicine, The. Carl F. Moll, M.D., 617.

Prostatic Resection, Transurethral: A Recent Development in Genito-Urinary Surgery: A Preliminary Report. Reed M. Nesbitt, M.D., 176.

Prostatic Surgery, The Present Status of. H. W. Plaggemeyer, M.D., and Carl G. Weltman, M.D., 254.

Pulmonary Cavity and Its Control, The. William A. Evans, M.D., 621.

Rehabilitation of Patient of Infantile Paralysis, The. Norman Capener, M.D., 191.

Renal Tuberculosis with Anuria Due to Calculus Disease. George Sewell, M.D., 199.

Retinal Tears in the Ora Serrata. Peter C. Kronfeld, M.D., 319.

Rickets in Infants, Effect of Evaporated Milk on the Incidence of. Donald J. Barnes, M.D., 397.

Russia, A Trip to—August and September, 1931. Robert MacGregor, M.D., 404.

Schizophrenia. F. L. Polozker, M.D., 34.

Secondary Anemia. Charles H. Watkins, M.D., 570.

Sensitization Tests, Fallacies and Merits of. George L. Waldbott, M.D., 698.

Septic Abortion Associated with Meningococcic Meningitis. Walter E. Larson, M.D., and Bernard H. Starmann, M.D., 267.

Serum, Convalescent. Edgar E. Martmer, M.D., 383.

Service of the Profession, The. Olin West, M.D., 763.

Ship Surgeon's Career, The. Wynand Pyle, M.D., 648.

Skin and Mucous Membrane Lesions, A Few, of Interest to General Medicine. George H. Belote, M.D., 368.

Skin Diseases, The Physical Therapy of the Commoner. Howard J. Parkhurst, M.D., 796.

Skin Grafting, A New Method of. C. V. Russell, M.D., 804.

Smith, Dr. Richard R., Honored, 201.

Sodium Amytal in the Treatment of Toxemia of Pregnancy. Robert Kennedy, M.D., 197.

Specialism: Its Ideals and Standards. J. M. Robb, M.D., 173.

Spinal Anesthesia in Cases of Emergency Surgery. Earl George Krieg, M.D., 456.

Spinal Anesthesia, Some Critical Remarks on the Recent Literature on. Frank A. Kelly, M.D., 790.

Surgical Lesions of the Large Bowel. Fred W. Rankin, M.D., 1.

Symplepharon, The Prevention of. Report of a Case and Description of Appliance Used. Frederick A. Baker, M.D., and Bertil T. Larson, M.D., 702.

Synephrin Emulsion, The Use of. Edward K. Carmichael, M.D., 33.

Therapeutic Radiology in Relation to Infancy and Childhood. Arthur U. Desjardins, M.D., 777.

Trichiniasis, A Report of Three Cases of, With One Death. C. N. Sowers, M.D., 479.

Trichomonas Vaginalis Vaginitis, The Treatment of. H. H. Cummings, M.D., 794.

Tuberculosis and Reproduction. Fred I. Adair, M.D., and Frank E. Whitacre, M.D., 23.

Tuberculosis, Bone and Joint, The Diagnosis of. Don King, M.D., 637.

Tuberculosis in Children and Adolescents. Harry D. Chadwick, M.D., 109.

Tumors of the Female Breast. Richard R. Smith, M.D., 787.

Undulant Fever (Brucellosis). Walter M. Simpson, M.D., 639.

University, The Super. Alexander G. Ruthven, 301.

Vincent's Angina. Aaron A. Farbman, M.D., and J. C. Danforth, M.D., 535.

Visceral Syphilis. Paul A. O'Leary, M.D., 567.

Welfare Movements and the Michigan State Medical Society. B. R. Corbus, M.D., 10.

DEPARTMENT INDEX

BEAUMONT LECTURESHIP FOUNDATION

Lecture No. 1. Howard B. Lewis, Ph.D. The Rôle of Amino Acids in the Animal Organism.
I. Cystinuria and Cystine Calculi, A Surgical and Medical Problem, 249.

Lecture No. 2. The Rôle of Amino Acids in the Animal Organism.
II. The Physiology of the Amino Acids, 307.

COMMUNICATIONS

Pages 57, 144, 227, 290, 430, 496, 553, 676, 723, 817.

COUNTY SOCIETY ACTIVITIES

Alpena County, 165.

Bay County, 81, 357, 358, 824.

Branch County, 236.

Berrien County, 357.

Chippewa-Mackinac County, 81.

Calhoun County, 165, 358.

Cass County, 296.

Delta County, 165.

Dickinson-Iron Counties, 165.

Eaton County, 236.

Genesee County, 81, 358, 359.

Gratiot-Isabella-Clare County, 81, 165, 166, 236, 237, 359, 503, 556, 557, 773, 824.

Gogebic County, 236.

Houghton County, 166, 167.

Hillsdale County, 237, 433.

Huron County, 825.

Huron-Sanilac, 825.

Ionia-Montcalm County, 81, 82.
Ingham County, 825.

Jackson County, 82, 167, 237, 296, 825.

Kalamazoo Academy, 826.
Kent County, 82, 83, 237.

Lapeer County, 237.
Luce County, 238, 297.

Marquette-Alger County, 83, 168.
Mecosta County, 83, 826.
Muskegon County, 83, 503.
Macomb County, 239.
Midland County, 239, 503.
Monroe County, 239, 503, 827.

Northern Michigan, 168, 239, 296, 433, 504, 556, 679, 827.

Oakland County, 168, 169, 504, 773.
Ontonagon County, 169.
Oceana County, 239.
O. M. C. O. R. O. County, 239, 240, 504.

Shiawassee County, 83.
Saginaw County, 169.
Saint Clair County, 169, 170, 297, 298, 359, 360, 433, 773, 774, 827.
St. Joseph County, 504.
Shiawassee County, 827.

Tri-County Society, 827.

Washtenaw County, 828.
Wayne County Medical Society, 238, 360, 557, 828.

DEATHS

Dr. William Appelbe, 723.
Dr. Thomas A. Baird, 429.
Dr. Louis Barth, 498.
Dr. William F. Bastendorff, 677.
Dr. Harry Bauguess, 498.
Dr. Albert L. Brannock, 817.
Dr. R. B. Canfield, 429.
Dr. C. D. Chapell, 145.
Dr. James Cleland, Jr., 57.
Dr. Edwin John Coran, 677.
Dr. Roy W. Griswold, 222.
Dr. Godfrey F. Hamlin, 429.
Dr. J. W. Harrison, 609.
Dr. Edwin E. Hubbard, 222.
Dr. Lewis C. Knapp, 348.
Dr. Newell E. Lavelly, 348.
Dr. James W. Losee, 816.
Dr. Joseph E. Maunders, 348.
Dr. James E. Mead, 429.
Dr. James A. Miller, 290.
Dr. E. T. Milligan, 348.
Dr. Isaac Newton Monfort, 57.
Dr. Charles Sumner Morley, 498.
Dr. James E. Orr, 498.
Dr. George W. Ridenour, 817.
Dr. H. D. Robinson, 498.
Dr. Jacob Rosenthal, 677.
Dr. George H. Sherman, 348.
Dr. C. A. Stewart, 498.
Dr. J. G. Stone, 348.
Dr. Ray C. Stone, 816.
Dr. William E. Upjohn, 723.
Dr. Leonard F. C. Wendt, 498.
Dr. Calvin A. Wisner, 723.

THE DOCTOR'S LIBRARY

Pages 86, 172, 242, 300, 361, 434, 506, 558, 616, 682, 775, 830.

EDITORIAL DEPARTMENT

A Century Dead, 672.
A Leaf from an Old Account Book, 719.
Advertising, On, 343, 719.
Alcohol as a Disinfectant, 608.
Annual Meeting, 112th, 605.
Annual Convention a Success, The, 716.
Are We Entering the Twilight? 284.
Automobile Accidents in Michigan, 671.

Beaumont Lectures, The, 283.
Birth Control, 218.
Cancer Committee, The, 138.
Commercial X-ray Laboratories, 421.
Committee on the Cost of Medical Care Presents Final Report, The, 812.
Courts and Doctors, 215.
Cults, Healing, 485.
Dr. Crane Honored, 718.
Dr. Judd's Address, 283.
Dr. LeFevre, President-elect, 669.
Dr. Ray C. Stone, 808.
Dilemma, The Horns of a, 547.
Education, The Value of, 217.
Eighteenth Amendment, The, 420.
Fears, 546.
Fifty Years Since Darwin's Death, 422.
Filament-nonfilament Count, The, 486.
For Your Own Protection, 50.
Graduates in Medicine, Concerning Recent, 343.
Group Insurance, 718.
Higher Education, 547.
Itemized Statements, 608.
Journal of the Michigan State Medical Society, 808.
Living Dangerously, 606.
Logic, 422.
Malpractice, 716.
Medical Economics, County Committees on, 419.
Medical Ethics vs. Business Ethics, 545.
Medical History, A Bit of, 219, 344, 423, 487, 547.
Medical History, A Bit of Ancient, 139.
Medico-Legal Defense, 285.
Medicine, Supply and Demand, 672.
Moist not Wet, 218.
New Year, The, 49.
November Journal, The, 813.
One Hundred Years of Medical Practice in Oakland County Village, 611.
Our Civic Duty, 606.
Out of Bounds, 670.
Over-production, 547.
Passing of a Pioneer, The, 717.
Periodic Health Examination, 423.
Populations, The Trend of, 138.
Post-Graduate Medicine, 419.
Post-Graduate Opportunities, 341.
Post-Hippocratic Medicine, 285.
President Moll's Address, 669.
Prophylaxis Against Malpraxis, 486.
Roentgenology as a Specialty, 216.
Scientific Outlook, 51.
Season's Greetings, The, 807.
Secret, A Valuable, 288.
Security, 51.
Sick Veterans, The Care of, 49.
Slandering, A New Way of, 546.
Social Training of the Physician and Surgeon, 420.
State Dues, The, 136.
Taxation, 137, 486.
Trends in Medical Science, 671.
Tuberculosis Bacillus Known for Half a Century, 342.
Tuberculosis Problem, The, 287.
Unfair Competition, 717.
Vitamin C Isolated, 421.
Wavelength, 344.
Wayne County Medical Society, The, 137, 546.

Writing of Medical Papers, The, 607.
X-ray Films, The Ownership of, 341.

FAMOUS MEN IN MEDICAL HISTORY

John Shaw Billings. Henry J. Faul, 204.
John Collins Warren. Royal A. Meyers, M.D., 39.
Austin Flint. Francis J. Heringhaus, M.D., 126.
Samuel D. Gross. Lawrence D. Dickey, M.D., 334.
Victor C. Vaughan. Charles H. McIntyre, M.D., 410.

INTEREST, OF GENERAL MEDICAL AND SURGICAL
Pages 435, 680, 776, 831.

MEDICAL ECONOMICS

Can We Afford State Medicine? Part I. J. G. R.
Manwaring, M.D., 224.
Can We Afford State Medicine? Part II. J. G. R.
Manwaring, M.D., 291.
Can We Afford State Medicine? Part III. J. G. R.
Manwaring, M.D., 348.
Can We Afford State Medicine? Part IV. J. G. R.
Manwaring, M.D., 427.
Can We Afford State Medicine? Part V. J. G. R.
Manwaring, M.D., 494.
Fallacy of Granting Life Diplomas, The. J. A.
Cameron, M.D., 143.

Medical Reform: Lord Dawson of Penn, London,
674.

Medicine in a Changing Age. J. C. S. Battley, M.D.,
814.

Medicine Today and Tomorrow, 552.

Value of Periodic Medical Examinations, The.
Bruce C. Lockwood, M.D., 225.

MICHIGAN'S DEPARTMENT OF HEALTH

C. C. Slemons, M.D., 46, 133, 212, 281, 338, 409, 483,
542, 583, 667, 805.

MICHIGAN STATE MEDICAL SOCIETY MEETINGS

Council Minutes of the Mid-Winter Session, 152.
House of Delegates, Proceedings of Special Meet-
ing, 231.

112th Annual Meetings, Proceedings, 724.

Proceedings 112th Annual Meeting, 724.

NEWS AND ANNOUNCEMENTS

Pages 58, 144, 222, 290, 347, 428, 497, 554, 612, 675,
722, 816.

WOMAN'S AUXILIARY

Pages 84, 170, 240, 298, 360, 433, 557, 774, 829.

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41A
495

